DOCUMENT RESUME

ED 384 281 HE 028 014

AUTHOR	Kelder, Richard, Ed.
TITLE	Interdisciplinary Curricula, General Education, and Liberal Learning. Selected Papers from the Annual Conference of the Institute for the Study of Postsecondary Pedagogy (3rd, Lake Mohonk, New York, November 10-12, 1993).
INSTITUTION	State Univ. of New York, New Paltz. Inst. for the Study of Postsecondary Pedagogy.
PUB DATE	94
NOTE	215p.
PUB TYPE	Collected Works - Conference Proceedings (021)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Classroom Techniques; College Instruction; Colleges; Community Colleges; *Core Curriculum; Course Descriptions; Critical Thinking; *Curriculum Development; Educational Change; Educational Innovation; Faculty Development; *General Education; Global Education; Humanities; *Interdisciplinary Approach; *Liberal Arts; Models; Multicultural Education; *Postsecondary Education; Teaching Methods; Universities

ABSTRACT

This collection of 26 papers focuses on interdisciplinarity and its impact on the core or general education curriculum at postsecondary institutions. The papers include: "Professing or Instructing: Outstanding Challenges in the Task of Facilitating Student Reflection on Identity as Individual, as Family Member, and as Citizen" (Steve R. Gordy and others); "An Integrated Humanities Base: The Results of a Pilot Study" (Stephen Wilhoit); "Putting the Culture into Multicultural Education: Toward a Critical Model of Cultural Literacy" (Stanton W. Green and Stephen Perlman); "Making Connections: Interdisciplinary Senior Capstones for a Core Curriculum" (Beth Daugherty and others); "The Process of General Education Reform: An Impossible Dream...Almost!" (Thomas Curran and others); "Revolutions in Science: Making Connections across the Core Curriculum" (Frank T. Kuserk and others); "Evaluating Two Liberal Arts Curricula: An Initial Assessment of Comparative Performance" (Peter Von Allmen and others); "Teaching Literature and Medicine: Unequal Marriage?" (Gayle Whittier); "Theoretical Models of Curriculum Integration for Postsecondary Curriculum: A Historical Perspective" (Rose A. Rudnitski); "Writing To Learn: Learning To Write" (Joel Wingard and others); "Initiating Change in College Classrooms Through Stories and Collaborative Discourse" (Jere R. Holman and Mary A. Jensen); "Scientific Literacy and Quantitative Thinking" (Michael I. Sobel); "Innovative Approaches to Teaching Introductory Geology to Urban Students in the New York Metropolitan Area" (Howard R. Feldman); "In Response to Conflict: An Innovative and Practical Application of Interpersonal Communication Courses" (Dudley D. Cahn and Barbara Geider); "The 'New' Rhetoric Across the Disciplines" (Alison Warriner); "The Teaching of Critical Thinking through Adolescent Literature" (Sheila Schwartz); "Faculty Development for Critical Thinking Across the Disciplines" (Mark Weinstein and Wendy Oxman); "Global Origins of U.S. Society: Manhattan College's Multidisciplinary Course: Its Inception, its Syllabus, the Burdens of Success" (June Dwyer); "Values and Diverstiy: Towards a Critical Multiculturalism" (Scott Brophy and Steven Lee); "Cultural Encounters: Interdisciplinary Faculty Development for an Intercultural Core Curriculum; (Judith DeGroat and others); and "Global Issues, An Interdisciplinary Core Course" (Clarke Chapman and others). (MDM)

ED 384 281

INTERDISCIPLINARY CURRICULA, GENERAL EDUCATION, AND LIBERAL LEARNING

SELECTED PAPERS FROM THE THIRD ANNUAL CONFERENCE OF THE INSTITUTE FOR THE STUDY OF POSTSECONDARY PEDAGOGY

1993

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EDITED BY
RICHARD KELDER

THE INSTITUTE FOR THE STUDY OF POSTSECONDARY PEDAGOGY
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THE STATE UNIVERSITY OF NEW YORK AT NEW PALTZ

Published and Distributed by:
The Institute for the Study of
Postsecondary Pedagogy
Humanities 110
The State University of New York at New Paltz
New Paltz, New York 12561

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Introduction

The papers that were selected for this publication were presented at the Third Annual conference of the Institute for the Study of Postsecondary Pedagogy on "Interdisciplinary Curricula, General Education, and Liberal Learning" held at Mohonk Mountain House in Lake Mohonk, NY from November 10-12, 1993. The three-day conference brought together faculty and administrators from across the nation to discuss interdisciplinarity and its impact on the core or general education curriculum. The conference opened with a provocative keynote presentation entitled "The Unbearable Lightness of Curriculum" by Madeleine Grumet, Dean of the School of Education at Brooklyn College, CUNY, and at the mid-way point of the conference, participants were spurred on by Elaine Maimon, Dean of Experimental Programs at Queens College, CUNY, who spoke on the topic "Peripheral Vision and the Curriculum."

What is striking is the number of papers that have been co-authored; this testifies to the critical and collaborative spirit of those faculty committed to cross disciplinary lines and create new pedagogical approaches and knowledge. Some papers represent the work of teams of faculty who have been engaged in reconceptualizing and transforming not only their general education curriculum, but also their respective academic cultures as well. These collaborative efforts indicate that learning communities are taking root in many postsecondary institutions and fostering new paradigms for teaching and learning. Also evident is the development of innovative pedagogies, especially those designed to reinforce meaningful connections between students' lives and the curriculum, and to teach critical thinking and writing in and across the disciplines. It is clear from these papers that interdisciplinary curricula and pedagogy have challenged and transformed the ways in which knowledge is viewed and constructed and have called into question the impermeability of the walls that separate disciplinary boundaries.

The authors represent a cross section of the academic disciplines and postsecondary institutions, public and private. The papers address the topics and issues currently at the center of the national debate in postsecondary education: multiculturalism and the canon, faculty development projects, experiential learning, general education capstone courses, and first year seminars, to list a few. Many authors speak to the common concerns of faculty engaged in the process of changing curricula and pedagogies within their academic disciplines and institutions, and reveal the challenges and satisfactions of embarking on a journey into new academic territory. For others, it is an opportunity to cast a critical eye on what they perceive as an uncritical concept of multiculturalism or a Euro-centered critical focus on the global curriculum. The innovative global studies courses described herein pose challenging questions to students about opposing values, beliefs and worldviews. Such perspectives seek to illuminate the complex issues associated with multiculturalism and the curriculum and lend a deeper meaning to the concept of cultural pluralism in a democratic society.

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Finally, many of the authors speak of the positive changes occurring in postsecondary education, and all recognize the importance of involving students in the educational process. I thank all of them for their contributions to this publication. I would also like to express my appreciation to Dr. Philip Schmidt, Dean of the School of Education, and Dr. William Vasse, Vice-President for Academic Affairs, for their continued support of the Institute, its goals, and projects. Also, I want to thank my colleagues at the State University of New York at New Paltz who have served as members of the Program Committee for the last four years and worked with me to develop the Institute and the conference.

Richard Kelder, Director
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Professing or Instructing: Outstanding Challenges in the Task of Facilitating Student Reflection on Identity as Individual, as Family Member, and as Citizen

Steve R. Gordy, Dana S. Dunn, and Robert H. Mayer
Moravian College

Our paper is concerned with the difficulties we encountered during two years' experience in teaching the "capstone" course of a Core Curriculum. The emphasis upon "difficulties" should not persuade the reader that this course is less than successful. While its execution was no simple or easy matter, and while we certainly fell short of our highest expectations for our efforts, both we and our students found these two semesters of "capstone" work to be fruitful and enjoyable. It occurs to us, however—given the constraints which attend a necessarily brief article—that colleagues might benefit more from an acquaintance with the problems we experienced (including the mistakes we made) than with the successes we enjoyed.

The theme of our course—hereafter referred to as the "Seminar"—was "American Character." The guiding spirit behind the Seminar's conception was the inquiry published as Habits of the Heart (Bellah, et. al., 1985). While our remarks will attend to the whole range of challenges which we encountered in conceiving and executing this course, we will emphasize especially the challenge we experienced in assuming the role of "professors" rather than "instructors." We choose this emphasis for two reasons. In the first place, we were challenged by the task of restraining ourselves in face of the opportunity to play the role of sages in the matter of others' role-formation. In the second place, this issue of "professing-not-instructing" is intimately related to a constellation of issues which attend the commitment to team-teaching, so that our experience in overseeing the Seminar has been typical of the experience of all our Moravian College colleagues engaged in the Core Curriculum.

No small portion of the challenges which confronted us was the necessary complexity of the course's conception. Beyond the difficulty resident with three teachers from disparate disciplines achieving consensus about the design of a course, texts, evaluation of students, etc., we also faced the requirement that the substance of our course have its own distinctive integrity while at the same time (1) explicitly calling upon the diverse content of the preceding six courses and (2) coherently rounding out the Core Curriculum's learning experience. This meant that we had to bear in mind the students' work during the preceding three semesters of Core courses.

The common learning experience provided by the Core Curriculum in advance of the Seminar was articulated in the following sequence of courses. During both semesters of the Freshman Year, students explored Western experiences of individual and community in "Microcosm/ Macrocosm." This course entailed close examination of nine "works" and selected dimensions of the particular "world" which each of the works disclosed. Toward the end of the Spring semester, for example, students read Remarque's (1958) All Quiet On The Western Front and examined the violent transition from nineteenth- to twentieth-century culture, technologies, and political orders. The Fall semester of "Microcosm/Macrocosm" was closely integrated with

"Communication," a course in writing-process. Integration of these two courses occurred at several levels: The subject matters of students' papers were generated in "Microcosm/Macrocosm"; papers were assessed by teams of faculty from both courses and counted toward the final grades assigned in both courses; "Communication" faculty attended to the "Microcosm/Macrocosm" readings and discussions as a part of their teaching responsibility. The fourth Core course during the Freshmen year is "Quantitative Problem Solving." This course explores strategies for defining and resolving problems accessible to quantitative thinking. At a minimum, students are expected to achieve a quantitative literacy sufficient for them to evaluate statistical interpretations and claims of the sort that are commonplace in the popular media (daily newspapers, weekly news magazines, radio and television news and analyses, etc.).

During the Sophomore year, students study "Revolutions In Science" (Fall semester) and "Global Issues" (Spring semester). "Revolutions In Science" examines the transformation of scientific paradigms from antiquity to the present. Prominent features of this course include laboratory experiences modeled upon those of revolutionary scientists of the past (e.g., repetition of Galileo's experiments in motion and gravity) and attention to the continuities and discontinuities among the various "natural" sciences. "Global Issues" introduces students to the conditions of our contemporary world (i.e., to the geographical, ecological, political, economic, cultural and racial-ethnic diversity of the planet) and the problems which currently attend these conditions. To date, one particular "issue" has been selected for close attention, viz. "food supply and hunger." Students engage this issue by way of studying patterns of food production and consumption on local, national, and global scales. In addition, each student is required to follow "current events," through regular reading of The Christian Science Monitor, in a particular nation of his or her choice.

Each of these courses, in important respects, has been conceived so as to build upon the preceding courses and to anticipate the subsequent courses. The close integration of knowledge at which the entire Core faculty aims, however, has remained more "goal" than "accomplishment" through the first two completed cycles of the Curriculum. Our falling short of the goal of integration has been as much a problem in design of the courses as in their execution. Moravian's "Core" faculty—whose collective commitment to the ideals of an integrated "common learning experience" cannot be faulted—reasonably can be faulted along one of two lines or, more likely, along both lines. Perhaps we have failed to communicate adequately among ourselves during the developmental stages of these courses. In this case, the task of building upon earlier courses and/or anticipating subsequent courses simply lacked sufficient attention. It is equally possible that we have found it very difficult to transcend the legacy of scholarly specialization and compartmentalization which education at the doctoral level has so effectively engendered and generously rewarded. The tendency to departmentalization of subject matters has proven to be quite tenacious—even when courses have been conceived precisely in order to disclose the multidimensionality and interdisciplinary character of real-world subject matters.

The closely-related challenges of integrated learning and multidisciplinary teaching, however, proved to be less daunting for the Seminar faculty than another challenge, viz. to strike upon a pedagogy which is commensurate with the Seminar's ob-

jectives. As the educators responsible for the execution of the "capstone" course, we aimed to facilitate the student's critical reflection upon his or her own life-experience and aspirations in light of texts which explore putatively "American" understandings of individualism, family life and values, and community and public life. We also aimed to facilitate frank and illuminating "public" exchange of views—not unlike the sort of discourse that, in our judgment, ought to occur within a community of free and responsible citizens. In order to enhance such candid exchange among the students, we committed ourselves to a spirit of "professing" and co-learning. Without abandoning our scholarly obligations and interests—including our vocational obligation to objectivity in critical inquiry and our shared sense of the appropriately professional distance between teacher and student—we nevertheless aimed to engage in the same sort of biography-driven personal responsiveness to texts and life-situations that we sought from our students. Each of us was required, then, to restrain himself from the temptation to "instruct" on the basis of a discrete disciplinary perspective. Two semesters of experience with the Seminar have also taught us that another temptation lurks in the responsibility for this learning-experience: our professing should not devolve into an effort at forming the "character" of each student in our own images. Following a description of the course itself, we will attend to the problems that seem to inhere in the endeavor to "profess-not-instruct."

The Context of Our Professing

> The term "character" refers to all those qualities that make one individual different from others. In particular, character can include one's personal moral nature or strength. This course will explore character from the perspective of being an American. Is there a uniquely American character? How is our American character played out in our private lives and our public lives? We will examine themes said to comprise the experience and formation of American character, including gender and relations between men and women, race, ethnicity, private life, individualism, and community and public life. To do so, we will read and discuss novels; a drama; auto-biographies; speeches, policy statements, editorials; and selections from a variety of scholarly studies. Our reading will always be undertaken with an eye toward identifying the components in these works that portray American character. Several films containing American themes will also be evaluated.

Thus reads the most recent syllabus description of the Seminar (Spring 1993). That course was organized into four distinct parts of uneven duration: overview, individualism, family life and values, community and public life. During the period of "overview," we aimed to introduce the students to our purpose together. We accomplished this task by posing the issue of "character" in terms of private and public identity and responsibility. We were candid about the fact that the three major components of the Seminar's organization reflected our bias—reinforced by the analysis of Bellah and colleagues (1985)—about the contemporary condition of American soci-

ety. The thematic units of the Seminar, then, and the sequencing of them (individualism, family life and values, community and public life) were neither accidental nor arbitrary; nor were they "ideologically" neutral. We were equally candid about the fact that our choice of texts both reflected the literary taste, religious perspective, artistic sensibility, etc. of one or another of us, and inevitably disclosed the Seminar's themes in a particular light.

The Seminar's Texts

The texts we selected for use in the Seminar were the following, presented here in the order in which they were taken up during the course of the seminar. During the period of overview, the students and professors viewed the film "Casablanca" and read Habits of the Heart (Bellah et al, 1985), "Preface" and Chapter 1. In addition, each professor offered brief remarks about his view of contemporary society—said remarks intended both to model candid public statement and to provoke initial discussion of issues. One professor, for example, questioned the sexual morality that is more or less dominant in the "popular music" made available on MTV. More generally, he raised questions about the influence of mass media in the process of moral-formation.

A novel, two essays, and a film provided the textual basis for our consideration of American individualism: Hawthorne's (1986) The Scarlet Letter, selections from Thoreau's (1983) Walden, a portion of Ayn Rand's (1964) The Virtue of Selfishness, and "Tucker," directed by Francis Ford Coppola. While we attended to a number of issues raised in these works, our emphasis fell upon the "iconic stature" of the individuals featured in these works: Hester Prynne, Thoreau and Rand, Tucker. What is the nature of the individualism of each of these characters? How is each one quintessentially American, if at all? How do they differ from each other—and how (and why) do Americans hold them together as models, despite their differences? At least two of the professors were passionate in their suggestions that the remarkable individuality of Hester Prynne and Henry David Thoreau, respectively, are especially admirable models of American character. Ayn Rand, as it turned out, came in for a sound intellectual thrashing (how else, since she could not speak for herself against the charges leveled against her).

Following the Seminar's consideration of the traditions of American individualism, students and professors took up issues of family life and, in light of the 1992 elections, issues of "family values." Our attention was turned initially to national political campaign agendas and rhetoric. Students reviewed various speeches, editorials, newspaper reports and periodical stories, and Congressional orations presented during the Summer and Fall of 1992. Given our constant attention to the role of religions in the formation of American character, we also read Congressional testimony in support of the Hatch Amendment offered by Archbishop John R. Roach and Cardinal Terence Cooke (see Jung & Shannon, 1988). We then proceeded through a series of texts selected for their less than optimistic disclosure of "family life" experience in contemporary America: Miller's (1949) Death of a Salesman, Updike's (1981) Rabbit Is Rich, Tyler's (1988) Breathing Lessons. In order to reinforce students' sensitivity to the seriousness of gender issues, we closed this lengthy segment of the

course with selections from Arlie Hochschild's (1989) The Second Shift and Mary Daly's (1978) Gyn/Ecology. Regardless of one's judgment concerning her claims, the Hochschild reading was significant for the opportunity it provided the faculty to "profess" about the circumstances of spousal and parental responsibilities in our society. Although our students seem to come from homes that are remarkably egalitarian, we had to acknowledge that "the second shift" phenomenon (working mother who is also primary care-giver/homemaker) was not unknown within our own households.

The Seminar's entree into issues of "community and public values" (the dynamics of responsible citizenship) was Lis Harris'(1985) account of life among Hasidic Jews in the Crown Heights section of Brooklyn. Discussion of this text was juxtaposed with Frank Capra's "Its A Wonderful Life," the classic film-portrait of one man's lifelong service to his family, friends, and small-town community. We concluded this final portion of the Seminar by discussing selections from Ben Franklin's (1986) Autobiography and The Autobiography of Malcolm X (X & Haley, 1964) in its entirety.

We encouraged our students to consider that these four texts together served to interpret the diversity of community-identity and "public" service which has been so prominent in the traditions defining American character. For every Benjamin Franklin there have been untold numbers of George Bailys. Of greater importance for our understanding of "American character," however, is the fact that for every Franklin or Baily—or Thoreau or Rick Blaine—there have been uncounted numbers whose lives unfolded along lines reminiscent of Hester Prynne or Malcolm X or Moshe Konigsberg, these latter figures every bit as defining of American character as the WASP-males that the tradition typically lifts up as models for our formation. Still more important for our sense of identity, perhaps, are the persons we know to be writ-large in the families and friends of Willy Loman, Rabbit Angstrom, and Maggie Moran. Our purpose from the outset of the Seminar was to facilitate our students' recognition that no single type or singular character has shaped American history and culture, or can lay claim to be defining of "American character."

Professing or Instructing

Following our second experience with the Seminar, we have a clearer sense of the difference between "professing" and "instructing" than we had in advance of the Seminar's original offering. It seems certain in retrospect that, while we were committed from the beginning to a posture of professing-not-instructing, the actualization of that commitment must be a matter of trial-and-error; it cannot be a fait accompli on the basis of simple conviction.

We began our collaboration convinced that "professing" should entail our candid disclosure of personal interpretations of texts and life-situations, our values, our biases, our existential questions and concerns. We recognized a limit to this candor, of course, albeit a limit that was, and remains, loosely defined and only affectively discernible. We aimed to maintain an appropriate professional distance between ourselves and our students. We were not inclined, for example, to be overly-specific about situations in our marital and parenting relationships. Just as we wished to maintain a common-sense level of privacy about ourselves and our families, we recognized that each student should feel secure about maintaining a comfortable level of personal

privacy even while "speaking from the heart" about the subject of character and about life in the "real" world.

We were agreed, then, that "professing," for the Seminar's purposes, should mean speaking not as experts or authorities but rather as fellow- citizens, as fellow-Americans, and as fellow human beings whose life-questions are no different than the questions beginning to occur for the students. "Instructing," which we aimed to avoid, is often more typical of what we do in those classrooms for which we have sole responsibility. In our own classes, each of us has in view a particular body of knowledge over which we have a certified mastery, e.g. exegesis of the synoptic gospels, statistical analysis, history of education in American culture. It is our intention, within the realm of our specialties and departmental tasks, to impart this knowledge to students who do not yet have masterful possession of it. We teach this knowledge, and the students learn it.

Even within the design of the Seminar, certain occasions c lled for "instructing" of this sort. Two examples will suffice to explain this qualification upon our professing. We judged it to be necessary to present our students with a very basic overview of Jewish faith and practice in order to contextualize the more specific subject matter of Holy Days (Harris, 1985). We also judged it necessary to provide a minimal amount of information about British and American Puritanism in order to prepare students for The Scarlet Letter (Hawthorne, 1986). The point is not merely that the possibility for thoughtful reading of a text is enhanced by a grasp of relevant historical background of that text. Puritan and Jewish contributions to American history and identity are substantial and enduring. Liberally educated students should know this, in our opinion. Within the limits of the Seminar, then, we judged it important to utilize some of our time together in the business of "instruction" about these matters. For better or worse, on these occasions the students took notes furiously while one of us instructed.

It remains our judgment that "professing" cannot be the sole mode of fulfillment of faculty responsibility to students. There are regions of knowledge that simply have to be "instructed" into students in order for "professing" and co-learning to occur. Simply stated, the commitment to "professing-not-instructing" is necessarily qualified by the necessity of a prior minimum of faculty lecturing and students absorbing the lecture. It goes without saying, of course, that lectures should be engaging and that students should expend subsequent reflection upon what they have absorbed. On the faculty side of the lectern, at this point, the trick is not to succumb to the very comfortable role of "instructing." Certainly one of the advantages of interdisciplinary team-teaching is its inevitable provision of gentle restraint upon each potential "instructor" by the mere presence of colleagues who are, because they lack credentialed mastery of some subject matters themselves, students and professors-by-nature where those alien subject matters are concerned.

Along this same line of qualifying the inevitability of "instructing," we became quite intentional about the rule-of-thumb that every portion of "instruction" should be conceived with an eye to eliciting existential concern from students and faculty. We were in agreement that the occasions of our instructing should serve as solicitations for subsequent dialogue and co-learning. Here again, of course, a degree of inescapable instructing obtrudes. Each instructor cum professor inevitably shaped in advance the possibilities resident in dialogue and co-learning by his selection and pre-

sentation of "necessary" context for the texts that were essential to the Seminar's reflection. For example, it was a Reconstructionist Jew and a Presbyterian minister who determined what material was adequate and appropriate for contextualizing Holy Days (Harris, 1985) and The Scarlet Letter (Hawthorne, 1986), respectively. Other instructors might have offered different contexts for the readings and, intentionally or otherwise, might have led the group's reflection along a different way.

A problem related to the discreet shaping of students' reflection by means of prior instruction is the problem of condescension. We aimed to engage our students in private reflection and public discourse about their future in the family, in the work place, and in the tasks of responsible citizenship. Very often, then, we were asking the students to project themselves into situations which are not readily accessible to them because of the natural limitations of their life-experience. With only a rare exception during the two iterations of the Seminar, these students were nineteen or twenty years old. They have not been spouses or parents, they have not worked for a living, they have very limited experience in the sphere of public matters. In short, they are immature vis-a-vis the very life-experiences that were the central themes of our course together. Many were the occasions when, as "professors," we were tempted to respond to our students that "adult life is not really how you conceive it," "the situation in view is more complex than you know," "certain forces that impinge upon human experience are more unyielding than you imagine," and so forth.

The professors feel the weight of Willy Loman's life more heavily than most of our students can. The dynamics between Rabbit and Janice Angstrom are more real and less off-putting to us than to most of our students. The more that we professed the reality and seriousness of the experience of these characters, the more likely we were to stress, as a parent might, that our students need only "wait and see" how their naivete and idealism will be tested by adult responsibilities. By and large, students do not want to consider that the Lomans and the Angstroms are all-too-real types of Americans. We walked a very fine line between facilitating each student's recognition that the Lomans or the Angstroms are possibilities for his or her life, and condescendingly insisting—however gently or unintentionally—that some among us will be a Willy or a Linda, etc. It is a gifted teacher, indeed, who can always recognize the difference between his or her own condescension, on the one hand, and effective professing, on the other. On the basis of our experience in the Seminar, we must judge that more students than not are "annoyingly" sensitive to the difference in our bearing.

Finally, we want to observe a phenomenon that has only gradually clarified itself for us. The role of "instructor" necessarily involves two persons: one person who takes on the task of instructing and another who must invite the task, even demand it. The instructor is only so effective in his or her task as those instructed are willing to permit. The vital corollary of the academic instructor is a population of students who expect to be instructed and are comfortable with that relationship. In our experience (which is not limited to the Seminar, in this case), students are as tempted toward the role of instructees as faculty are toward the role of the instructor. If professing-not-instructing requires an act of will by the faculty members, it also requires an act of will among the students. The professing faculty must be willing to suspend their more typical personae as certified authorities and be willing to coax their students along the same path. For the students, the passive learner is the easier, safer, and more

familiar role to play, if not always the more engaging and satisfying role. It is simply not sufficient for the faculty to commit themselves to a posture of professing. Faculty have to be willing and able to convince their students about the value of the students' side of the professing-coin, viz. thoughtfulness and candid dialogue. In an era when students are tempted to prefer instruction that prepares them for successful employment, we take note that professing and co-learning is not only a challenge on both sides of the lectern but also a significant public service to our future as a community.

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The authors gratefully acknowledge the financial support for the Core Curriculum provided by The National Endowment for the Humanities, The Charles A. Dana Foundation, and the Moravian College Faculty Development and Research Committee.

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An Integrated Humanities Base: The Results of a Pilot Study

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The University of Dayton, a residential, Catholic institution, enrolls around 6,400 undergraduate students, with first-year classes averaging 1,500. It offers a comprehensive undergraduate program and advanced degrees in engineering, business, religious studies, English, and several other disciplines in the humanities.

Like faculty at many schools, we have been reevaluating our general education program for a number of years, instituting major revisions in 1983 and 1991. Prompting each change was a sense of dissatisfaction with the way our general education program was working and a desire to create a more unified, coherent introduction to the arts and sciences.

Our first major step toward a more integrated general education program occurred in 1983. With the help of a grant from the National Endowment for the Humanities we instituted our Core Program, a sequence of ten courses in philosophy, history, religious studies, English and the social sciences each centering on the theme of "pluralism and human values." The faculty involved in these courses meet regularly to discuss their readings, assignments, and class activities. For ten years now, our Core Program has offered students an integrated, sequenced general education program more typical of a small liberal arts college than of a larger comprehensive university.

The real weakness of the Core Program is the number of students it can serve--only 160 a year. After many discussions involving faculty throughout the university, in April, 1991 the Academic Senate approved a new, comprehensive revision of general education modeled on the Core Program but involving all first-year students. Central to this new program is the integrated Humanities Base.

Three years ago we began designing the Humanities Base and last year ran a pilot study with 243 students. As Figure 1 shows, the Humanities Base consists of four courses in philosophy, religious studies, history, and English. Under the program, all first-year students take all four courses during their first year of study. The Academic Senate had three primary goals for the Base: to give students the knowledge and skills they need to complete their remaining general education requirements, to help them form the habit of making connections between the courses they take, and to help them form their own vision of the program's central unifying theme: what it means to be human. This central theme was later divided into four sub-themes--autonomy and responsibility, the individual and community, human beings and nature, and faith and reason. Every Humanities Base course addresses these themes from its own disciplinary perspective.

These themes helped us insure that students have an opportunity to integrate material they have learned in different courses. For example, when I assign students to read an essay or write a paper in my English class that addresses the theme of autonomy and responsibility or faith and reason, I know that these issues have been raised in some of their other classes. I can ask students to draw on what they have learned in these other courses as they work on my assignment.

But we also faced a problem of unity among the courses within the disciplines. Each instructor in philosophy, for example, will develop his or her own way of addressing these four Humanities Base themes--his or her own readings, assignments, and class activities. To help insure some uniformity of course content across the sections of each course, we asked each discipline to choose one text that all the teachers in that discipline would include in their syllabus. As Figure 1 shows, for the initial pilot study, English chose to use All Quiet on the Western Front, philosophy chose the Apology, history chose The European Miracle, and religious studies chose a series of short readings including Genesis 1-3, Exodus 1-16, the Gospel of Mark, and the Sermon at Benares. Whatever texts instructors use in their course, they must include this common reading, as well.

All of the teachers involved in the Base program read all of these common texts, again giving us a way of integrating our course with the other classes. For example, if I see a connection between the decisions Paul Baumer faces in All Quiet and those confronting Socrates in The Apology, I can point them out, knowing many, most, or all of my students have read and discussed Plato's work in their philosophy class.

To implement this new program, the Associate Provost for Undergraduate Education formed the Humanities Base Ad Hoc Commit-tee made up of the chairs and one faculty member from the four departments involved in the program. Over two semesters this Ad Hoc Committee worked together to redesign the courses involved in the program, debate the choice of common readings, develop ways of integrating the courses, and design the faculty training pro-gram. These truly collaborative planning sessions were often heated, frequently confrontational, but usually productive. We had to overcome several obstacles: fears over disciplinary integrity and academic freedom, disagreement over the meaning of the themes, disputes about the suitability of the common readings, concerns over the program's ability to reflect non-Western cultures, disagreements over the nature of the assignments we would require. In the end, many of the committee's decisions were provisional--we did the best we could, knowing that experience would probably lead to change.

Once we redesigned the courses, we turned our attention to the first faculty workshop. Each department identified five or six faculty members who would be teaching one of these four courses in the pilot study. These teachers attended a week-long training session, May 4-8, 1992.

While working out the course syllabi and considering ways of integrating the classes, the members of the Ad Hoc Committee concluded that many teachers would use writing assignments to help their students draw connections between the courses. Consequently, we opened the workshop with an all day session on writing across the curriculum.

On the second day of the workshop, each faculty member of the Ad Hoc Committee offered a forty-five minute introduction to the text his or her department selected as the common reading. The aim of the presentation was two fold: first, we were supposed to explain how the text addressed the Humanities Base themes; second, we were supposed to describe how we planned on using the text in our class. We allowed about a half-hour for discussion after each presentation. As it turned out, every text came under attack from faculty within and across the disciplines. Often angry debates over the text that originated in department meetings were continued here. Fac-

ulty from the other disciplines then joined in, and the presenters ended up having to defend their department's choices.

These plenary debates brought to light three facts working against us as we tried to get the faculty ready to teach in the program. First, many of the faculty had grave doubts about the entire enterprise. Some were certain that these courses **could not** be integrated; others were certain that they **should not** be. Second, many faculty members brought their own agendas to the workshop. The feminist scholars wanted their interests represented; the marxists wanted their concerns addressed; the liberal humanists wanted their voices heard. Finally, many faculty members had a hard time seeing beyond the perspective of their discipline and trusting the expertise of their colleagues. They frequently wanted to tell the faculty from the other disciplines what they should and should not teach.

Curiously, though, the faculty reacted differently to the small group sessions that were also a part of the workshop. Here seven or eight teachers from the various disciplines worked together on pedagogy: How could we structure our classes to meet the needs of this new program? How could we use the common readings in our classes? How could we make accessible to students ideas we ourselves were having trouble discussing? In these small groups faculty seemed to be on more comfortable ground and were more willing to trust the experience and expertise of our colleagues.

A survey of the participating faculty after the workshop revealed lingering uncertainty, though. Problems with the common readings remained, but more daunting were comments touching on academic freedom. Wrote one teacher, "I do object to being `told' to teach the course in just that way," and another, "The unification of readings is a prescription for disaster and the end to academic freedom. To promote such a unified scheme is really the absolute antithesis of what the cutting edge is all about." We left this workshop to spend the rest of the summer preparing for our classes and waiting for the students to arrive.

I taught a section of English 114 the first semester of the pilot study. The students knew they had been placed in "experimental" sections of this new program--some were uncertain about this; most seemed indifferent. From the beginning of the term, though, the benefits of linking courses began to show. I urged my students to let me know when we addressed material covered in one of their other classes (they developed the rather annoying habit of shouting out "link!" when they saw a connection). I had them write papers on the readings from their other courses and give oral presentations on the material for students not yet taking those classes. Generally, the students came to my class prepared to think carefully about the unifying themes.

Fortunately, almost all of the other teachers were experiencing similar success. The mood of the mid-term dinner and workshop we held that fall was completely different from what we had encountered the previous May. The faculty seemed relaxed and eager to share success stories: the students really were catching on to the themes, they really were able to make connections, they really could perform well in this type of program.

This new-found enthusiasm was a good sign since we were counting on these teachers to help us train the remaining faculty in the four departments in a two-week workshop the following summer. In total, 65 faculty members and part-time instructors participated in this second workshop.

We learned several important lessons from our first faculty workshop. Most of the whole day sessions were gone. Instead we gave a prominent role to the small, interdisciplinary group meetings--most faculty found these more productive than the plenary sessions. We spent only one day discussing the themes and several days discussing the texts since in the pilot we found that most instructors addressed the themes through the readings. We again devoted quite a bit of time to writing across the curriculum, trying to draw on the expertise and experience we'd gained in the pilot study.

Almost entirely gone in this workshop was the distrust and suspicion that had marked the first sessions. We now had experienced faculty from every department who could testify that the program was not overwhelming, that teachers could adapt their existing courses to meet the needs of the Humanities Base without drastic overhauls of content or pedagogy. They also could testify to the effects of the program on their students: by and large, the students enjoyed being a part of the Humanities Base and greatly appreciated their professors' efforts to integrate the courses.

A survey of participants' reactions to this second workshop showed that faculty most valued the ability to more fully understand the other departments' views on the texts, themes, and teaching strategies, the opportunity to learn how others planned to integrate the courses, the chance to evaluate how well the pilot study worked, and the opportunity to shape the future direction of the program.

Our efforts to assess the students' reactions to the pilot program took several forms. First, nine students were selected for intensive, one-on-one focused interviews concerning their course work. (We selected three students with high SAT scores, three with mid-range scores, and three with low scores.) Second, all of the students in the Humanities Base program filled out course evaluations soliciting their opinions on how well classes and program worked. Finally, because so many faculty felt they would use writing assignments to integrate the courses, we asked every student in the pilot to turn in for analysis all the papers they wrote in their Humanities Base classes.

The focus group students were interviewed just after the mid-term point of the first semester of the pilot program. These students noted a number of strengths to the program. First, they liked the idea of integration--covering the same material in more than one class helped them learn it more thoroughly and, they thought, saved them some work. The students also appreciated the teachers' efforts to link courses, even if some of the classes were not yet running so smoothly. However, many students experienced theme burn-out: so many teachers concentrated so much attention on the themes, the students got tired of hearing about them. Also, they felt that some texts were being emphasized more than others. Finally, the students truly resented faculty who made no attempt to link their courses with others or who openly criticized the program.

The course evaluations students filled out at the end of the first term of the pilot study also gave us some sense of how well we were doing. These questions focused on three areas: the themes, the texts, and the course goals. As Figure 2 shows, the students felt that the theme of individual and community was dealt with most explicitly in their courses, while only 41% felt autonomy and responsibility was fully addressed. In terms of texts, All Quiet on the Western Front did well--73% of the students felt Remarque's novel helped them understand the common themes. As expected, the students found The European Miracle difficult to read and nearly impos-

sible to understand. Half of the students felt that the courses helped them think more carefully about ethical issues and draw connections between the ideas raised in different classes while only a third felt that they were asked to reflect on what it means to be human.

When the same questions were asked at the end of the second semester, some interesting changes had occurred. First, the students felt that all of the themes were dealt with more explicitly in their classes, with large gains in faith and reason, human beings and nature, and autonomy and responsibility. While All Quiet continued to be viewed as a strong text, the religious studies readings seemed to be more helpful. Finally, more students felt that questions about what it means to be human were raised in the second term, though, on the whole, we seemed to do a weaker job of reaching some of the other course goals.

The faculty workshops and student evaluations seemed to have a telling effect on pedagogy. The comments of the focus group half way through the first term helped us realize that some of us were concentrating too much attention on abstract discussions of the Humanities Base themes and paying too little attention to the common readings. The course evaluations seemed to confirm our concerns: our classes were not clearly addressing the themes. Most of us decided that during the spring term we would try harder to explain to students how all the themes emerged in the common readings, giving the texts a more prominent place in our courses. That shift seemed to help. Over the spring term the students thought we addressed the themes more explicitly and saw the common texts as more helpful. Clearly, though, we still have a long way to go in reaching our course goals. Most disappointing is our relative failure in helping students reflect on what it means to be human, the central question of the program. Instead of concentrating on this over-arching question, we tended to discuss only the four sub-themes.

Finally, a review of the students' portfolios demonstrated the important role writing played in most of the Humanities Base courses. While we asked all of the pilot study students to save the essays they wrote each term and turn them in to us, at the end of the fall term only 69 students turned in their work; at the end of the spring term, 57 did. The essays in these portfolios helped us reach a few conclusions. First, teachers across the disciplines required their students to complete a wide variety of writing assignments. In the fall term, students turning in portfolios had been asked to complete 269 graded and ungraded assignments; in the spring the number rose to 404. Teachers asked their students to compl[illegible]15 different types of writing assignments during the fall term; 24 different types during the spring term.

Clearly, certain teachers in certain disciplines had their favorite type of assignment (source-based arguments in English, response papers in religious studies, thematic reviews in history). However, many teachers reported using certain types of essays for the first time during the pilot study. Particularly encouraging was the number of teachers adopting a "process" approach to their assignments: helping students develop material for their essays, working with them to organize their ideas, responding to preliminary drafts so the student has a chance to revise in light of the teacher's suggestions.

Many teachers were also using writing--especially ungraded assignments like response essays and journal entries--to help students make connections between their

classes. Quite a few instructors required their students to complete essays on the common readings chosen by another discipline: writing about The Apology in English or All Quiet on the Western Front in history. The students seemed to particularly enjoy these types of essays. When asked on the end of term survey what aspect of the course best helped them understand the program's themes, students most frequently mentioned writing assignments. However, reading these essays made one point clear: unless the teacher specifically asked students to make connections between their courses in their essays, few connections appeared.

Largely as a result of our faculty workshops, the second term saw teachers experiment more freely with writing in their classes, asking students to complete letters and book reviews, study guides and position papers. Listening to how other teachers were incorporating writing in their classes seemed to give the Humanities Base instructors the confidence they needed to try something new. On the other hand, while the types of essays students were asked to complete expanded during the fall term, their focus contracted: in the fall, many writing assignments asked students to consider what the themes meant to them personally; in the spring, they were more likely to call for formal, academic treatments of the themes. The number of ungraded reflection and response essays fell while the number of research papers, thematic analyses, and source-based arguments rose. Perhaps this shift in assignments can help explain why the students felt they gained a better understanding of the themes and texts during the spring term.

Overall, the Humanities Base program at Dayton is off to a good start: teachers are finding innovative ways of helping students integrate information from courses across the disciplines and students are finding the enterprise interesting and beneficial. As the course reviews show, though, we have a lot of work to do: we have to find better ways of addressing the central question of the Base (what it means to be human), better ways of training faculty, and better ways of developing a sense of cooperation among the instructors. The pilot study shows, however, that we can succeed in offering students an integrated Humanities Base even at a comprehensive university.

Figure 1: Humanities Base Structure

Courses involved

A. Philosophy 103--Introduction to Philosophy

B. Religious Studies 103--Introduction to Religion

C. History 101--Western Civilization to 1715
or
History 102--Western Civilization since 1715

D. English 102--College Composition II
or
English 114--Freshman Writing Seminar
or

English 198--Freshman Honors Seminar

Themes

What It Means to Be Human
--autonomy and responsibility
--individual and community
--human beings and nature
--faith and reason

Common readings

English--All Quiet on the Western Front

History--The European Miracle

Philosophy--The Apology

Religious Studies--Genesis 1-3
Exodus 1-16
Enuma Elish Creation Story
Sermon at Benares
Gospel of Mark

Figure 2: Pilot Humanities Base Student Surveys, 1992-1993

1. Theme

Students seeing the theme as dealt with explicitly in their classes:

	December %	April %
Individual and Community	67.5	64.3
Faith and Reason	50.2	62.4
Human Beings and Nature	48.5	54.5
Autonomy and Responsibility	40.9	53.5

2. Goals

Students seeing the goals as being achieved:

	December %	April %
Think about ethical issues	50.6	49.5
Knowledge connected	47.9	44.6
Non-Western cultures addressed	45.3	40.6

Reflect on being human	34.2	39.6
Feeling like a community of learners	29.6	20.8

3. Texts

Students seeing texts as *helpful in understanding themes:*

	December %	April %
All Quiet of the Western Front	73.3	88.0
Creation Myth	56.5	64.7
Mark	49.6	73.7
Apology	48.7	65.3
Genesis	44.3	79.3
Exodus	39.6	59.0
European Miracle	15.4	26.3

Summary of Written Comments

1. Most students identified as "the best thing" about the HB the emphasis on themes among the courses and the common readings.

2. Most students identified as "the worst thing" about the HB the struggle to see connections among courses, "uncooperative teachers and theme fanatics," professors who make reference to material some students had not studied, and uncertainty over the program's goals and structure.

Biographical Note

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Putting the Culture into Multicultural Education: Toward a Critical Model of Cultural Literacy

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Debate on the issues of multiculturalism and cultural literacy focuses on the effects of pluralism on American culture and education. One side portrays multiculturalism as a movement that fosters subcultures to the detriment of an idealized American culture (Schlesinger, 1991; Bloom, 1987), while another side argues that diversifying educational content balances an appreciation of the values and identities of subcultures within the general rights and responsibilities accorded to all Americans. (Bloom, 1993; Taylor, 1992). E.D. Hirsch (1987) frames this argument in terms of literacy. His premise "that there is a body of information that each American should know to take part in our shared culture" rests on the notion that culture can be broken down into bits of information or traits. Literacy, in these terms, is the "knowing" of Hirsch's predominantly Anglo-American based cultural lists. But many attempts to diversify Hirsch's original list (Hirsch, 1993; Simonson and Walker, 1992), rely on such lists of cultural traits. This general argument broadens into the so-called 'canon-wars' where literacy is tied to cultural genres of literature (Atlas, 1992; Gates, 1993).

We argue that cultural literacy involves much more than trait lists or literacy canons. Culture defines a wide range of doing things, talking about things, thinking about things and even thinking about thinking. Literacy, in turn, incorporates the communicative and cognitive abilities necessary to implement culture through human language. This involves a whole array of verbal and nonverbal means of communication. To preview our argument, we agree with the proponents of active learning that the answer to understanding our shared culture lies in learning to ask questions not in memorizing answers.

In this paper, we would like to move this argument away from notions of nationalism and inventories of American culture toward a critical model of cultural literacy. To do this we draw upon anthropological theory to develop process models of culture, culture change and literacy. We attempt to put culture into the multicultural debate in order to devise curricula and pedagogies that are appropriate for educating the next generation of Americans.

MULTICULTURALISM

Because many of the problems addressed by multicultural education are practical (e.g. multiple language classrooms) and political (e.g. appreciation of minority cultures) the solutions offered are often particularistic. For example, the development of bilingual education and heritage weeks seek to meet particular problems. These are laudable endeavors; however, broad range solutions must be based on a sound conceptual understanding of how culture works. To move toward classroom issues, we must operationally define culture and understand how it changes, diversifies and agglomerates. We must understand culture as a dynamic process - one that is continuously changing internally and in relation to its social and natural environs.

When culture is viewed as a dynamic process we can see why it is so difficult to define an American Culture. The American continent has always been multicultural. Indeed, the resent colonization of peoples from the Old World (Europe, Africa, Asia) only complemented the already diverse cultures of Native Americans (the first colonizers from Asia). The interaction between these cultures over time forms the mosaic of American life. If one could define an "American" culture, which culture from which time would it be?

The pedagogical implications of this perspective are direct and profound. Conceptualizing culture as a process, instead of culture as a body of seminal knowledge, changes the way we frame the educational content and pedagogy of our schools. Ultimately, this changes the way we conceptualize the role of the teacher, the structure of courses and what we expect of students in a multicultural educational curriculum. Before discussing these implications, a definition of culture is required and a link established between that and multiculturalism.

WHAT IS CULTURE?

Ask one hundred anthropologists and you will get one hundred definitions of culture - or so it seems at the surface (Kroeber and Kluckholm, 1963). However, the conceptual core of what anthropologists (and many social scientists) would define as culture has several common elements: Culture is learned, it is shared by a group, and it concerns ideas, values, attitudes and behaviors. That it is learned distinguishes it from the innate or instinctual aspects of human behavior. Although this distinction is not always crystal clear, in most cases one can differentiate the learned from the innate. Food preference rests on biological reactions on one tongue - however, what is defined as edible is primarily learned as a part of a group. Color can be measured in terms of the physical wavelengths of the spectrum - but again, different cultures and subcultures recognize widely variable categories of color.

Learning can take a variety of forms. Fried (1967) offers a triad of learning types (three being a magic number in American Culture): situational (trial and error), social (imitation) and symbolic (language). Of these, symbolic learning is the one that makes human beings qualitatively different from all other species. Although symbolic learning has been attributed to other species such as chimpanzees, gorillas, whales and dolphins, our species alone relies on symbolic learning and our species has elaborated this capability far beyond other species to what we call human language.

Culture is also shared. Groups of people learn a common set of ideas, values and behaviors. This sharing is always in relation to other groups and their associated cultures. Sharing, however, does not denote homogeneity. It essentially speaks to the fact that variation within a culture is less than that outside of it. The food preferences of southern white Americans are certainly not monolithic. However, one could find a pattern quite distinct from, for example, northeastern Italian Americans.

Finally, we come to the substance of what is learned and shared: values, ideas, behaviors, and attitudes. Cultures establish viewpoints. Members of cultures share a view of how the world works and how it ought to work. And they share a way of communicating about it. This brings us to the issues of literacy.

LITERACY

Once we conceptualize culture as a learned viewpoint, we can begin to understand how it is implemented into behaviors. We can also begin to examine the role culture plays in education and begin to define literacy in cultural terms. For this, we begin with sociolinguist James Paul Gee's (1991) notion of literacy as a competency that derives from the successful use of a set of discourses. A discourse, in turn, is a "socially accepted association among ways of using language, of thinking and acting that can be used to identify oneself in a number of socially meaningful groups or 'social networks'" (1991:3). He sees a discourse, then, as an 'identity kit' that provides much more than language in the narrow sense of verbal written communication - it provides a way of using language socially, a set of rules of interaction, and a variety of nonverbal components.

Everyone behaves within a variety of discourses. These are associated with a person's set of statuses and roles in society. One's primary mode of discourse is acquired within the primary social unit - usually a family unit. Many Americans acquire Standard American English as their primary mode of discourse. The most obvious type of secondary discourse would be a second language - Spanish for Anglo-Americans, English for Hispanic-Americans. Other examples are technical discourses. Indeed, anthropology has its own mode of discourse that both regulates the way Anthropologists interact and differentiates them from other social scientists and academics. To be literate is to be competent within a mode of discourse. Literacy, therefore, is a form of cultural competence.

Gee (1991) makes an important distinction between two manners of becoming literate. Social contexts provide subconscious venues for acquiring competence in a discourse. He distinguishes this from learned discourse that is obtained within formal, conscious settings. The distinction is important. Primary modes of discourse are acquired within one's social/family unit. They are essentially learned as part of one's basic socialization. As such, one's primary discourse involves acquired ways of social interaction. Secondary modes of discourse are for the most part taught formally, although acquisition may also be involved. When formal learning is the primary source of literacy, then basic language and communication skills may be emphasized with limited acquisition of such things as nonverbals and concepts of social space and time.

The fundamental implication this has for education is quite obvious. In the U.S.,

primary English speakers have the great advantage of being taught within their primary discourse. Moreover, variations of standard (white) English tend to dominate public education. English speakers and persons who gain their fluency largely as learned secondary discourse seldom become as proficient in the use of English as those who gain their fluency as acquired primary discourse. Speaking the language is only part of mastering a discourse.

CULTURE PROCESS, CULTURE CHANGE AND CULTURAL LITERACY

Cultures and their associated discourses and literacies change as a result of their own internal dynamics and in relation to other cultures and external factors in their environment. Culture is an historical process. If we meld our notions of culture and literacy, we can begin to see culture change as an inevitable, unavoidable historical progression and an equally inevitable and unavoidable educational process. Cultures change as shared ideas, values, attitudes, and behaviors etc. are altered as a consequence of interaction among members of a culture and between members of different cultures. This can involve peer interaction or intergenerational interaction. It can involve acquisition and learning.

This anthropological view of culture clashes with the static view of culture that underlies the encyclopedic notions of cultural literacy put forth by Hirsch (1987). Hirsch distills culture into an inventory of knowledge, a 'canon' of ideas that must be passed on from generation to generation in order to maintain a particular culture. Inappropriately, Hirsch refers to his model as anthropological because it does view culture as learned and shared - what is missing is culture's fundamental and undeniable variability and dynamic (cf. Carroll, 1990).

MARGARET MEAD'S NOTION OF CULTURE CHANGE

Although she was writing well before the multicultural-cultural literacy debate was formulated, Margaret Mead's examination of the American School (1951) and the 1960's generation gap (1970) speaks poignantly to the debate. She searches for the processes causing the breakdown in American education and the communication between generations. Rather than assuming that this breakdown is the result of the younger generation simply not gaining the wisdom of the former generation (either because of their inability to learn it or the elders inability to teach it), she finds the reasons in the process of culture change itself. Not only do cultures change at different rates, she posits, but they change in different ways. Moreover, the engine of change is not just reliant on passing information down through the generations. Rather, change in modern cultures requires information flow in all directions. The processes she delineates as generating the generation gap, we would argue, are indeed the ones that underlie the culture gap that Hirsch is attempting to confront with his cultural literacy proposal.

Mead begins by asking the simple questions of how and why cultures change. She posits that cultures vary in their stability and, therefore, in their pace and nature of change. All cultures change, but not necessarily at the same rate, and even more importantly, not necessarily according to the same rules. Culture change is related to

the nature of learning and education within a given society. In the words of the current debate, the road to cultural literacy may follow different paths in different cultures. Cultural literacy may mean different things to different cultures. Mead offers three cultural paths: prefigurative, cofigurative and postfigurative; rather cumbersome terms that Carroll (1990) has updated to traditional, transitional and learning cultures. Each path differs in how a culture reproduces.

We offer a distillation of Mead's model in Figure 1 where each cultural path is examined in terms of the nature of change, the rate of change, and the ideology of change. Traditional societies are based on the fact that the future essentially repeats the past. Change is slow and unfelt and is seen as essentially cyclical. Culture is passed on and assimilated orally. Culture is passed on from elder to younger, and everyone essentially embodies their culture. As an example, when asked what a Dani is, they reply that Dani are farmers who grow sweet potatoes. This is part of each person's notion of being and it is understood across generations (Heider, personal communication). All of this takes place within multiple generations (usually three) and is passed on within a "coherent oral tradition" (Berry 1970).

Transitional cultures break this coherence. Change is quicker as the present guides the future. Time now becomes more linear (although it can include cyclical elements). Formerly well-defined societal boundaries now leak - so that immigration breaks the continuity of experience felt in traditional society. Peer learning becomes more important as the heterogeneity of the culture increases. Moreover, previous older generations provide a wider variety of viewpoints as a result of immigration. The nuclear family becomes the primary social context of learning and usually only two generations become the social-time unit.

Learning cultures rupture the coherence of generational social reproduction. In this world the future is independent. Change is accelerated, time is fragmented, and each generation is essentially a set of 'immigrants in time.' Knowledge is global and instantaneous. News is as fast as the speed of light. The 'history' of the Persian Gulf War was viewed as it happened as millions of people watched the skies of Baghdad explode with missiles, bombs and antiaircraft fire. In this kind of world, the distinction between present and future becomes blurred and independent from the past. Learning can be essentially instantaneous and the contexts for socialization extremely complex. The primary social unit becomes widely heterogeneous - ranging from single parent households to stepfamilies. The result of this is that "(T)he older generation can never say they were young once, because they were never young in the world of the current generation." (Mead, 1970:75). How does a cultural literacy model work in such a culture.? What make us culturally literate in such a fast-changing and diverse society?

Mead's lesson is that we can not succeed in passing on our cultural values without understanding the nature of culture change in contemporary society. And we must understand that the nature of this change is different from that of the past. The perceived educational crisis is not just the result of a gap in knowledge but gaps in culture and how people learn. It is based on differences in viewpoint, how that viewpoint is communicated and how people interact.

If our educational system is not attuned to the nature of our cultural dynamic, then the generations can not easily communicate and the next generation can not be reached.

There is, of course, much communication between generations outside the educational system; but with the emphasis on formal learning in our society and the need for so much technical learning, the gap in communication in our schools is particularly problematic. In a sense, the generation gap is a temporal version of the discontinuity we observe between the subcultures of our pluralistic society and world. Cultural pluralism in the modern world is the result of space-time processes.

PEDAGOGICAL IMPLICATIONS FOR COLLEGE AND UNIVERSITY EDUCATION.

What then are the goals of cultural literacy and can multicultural education achieve these? Rationales for multiculturalism include supporting the identity formation (i.e. self-esteem) of students, recognizing other ethnic groups and giving them equal support in the curriculum, and increasing historical accuracy. Hirsch argues for a synthetic and comprehensive knowledge base for the succeeding generations. Although these are at odds on many counts, they seem to share two interesting elements. First, most multicultural models view culture as a divisible entity so that discrete ethnic or social groups can be teased out of American society. Second, they accept the sanctity of the specific disciplines that divide the knowledge base of American education. Anthropological theory focuses, in contrast, on the continuity between cultural systems and offers an interdisciplinary methodology that bridges and links traditional disciplines.

Hirsch's trait list of knowledge, like any other typology, has a set of rules for inclusion that cuts down on variation and creates an homogeneous grouping of cultural attributes. Recent adjustments in the dictionary have attempted to be more multicultural. Items from other social groups have been able to meet the criteria for inclusion in the typology. While this is commendable, it begs the question. Even if a culture trait list could be all-inclusive, its existence assumes that a specific set of data can be utilized to accurately identify the values, beliefs, and behaviors of all members of a certain society. As we note above, trait lists can not represent the complexity nor the dynamism of culture.

Multiculturalists defend the rights of each segment of society by emphasizing relativity. One can not hierarchically rank cultures. Each has its own history and raison d'etre and should be respected, appreciated, and recognized in our schools, businesses and communities. If we can achieve awareness, we can get closer to appreciation and respect and the abatement of intolerance and racism. We do not disagree with these goals, we only ask, is the way we are going about trying to achieve these goals going to get us there?

Multicultural programs frequently focus on the history and literature of particular cultures. If a culture occupies a specific geographic, or sociological space, some information is presented about the group's environmental context. Ultimately, the culture becomes associated with particular events or thoughts or situations. This information is usually presented from within the perspectives of particular disciplines. Ultimately, we must ask whether these multicultural trait lists are conceptually different from Hirsch's one list. The main difference appears to be the relativist's argument that one list can not represent the rich diversity we find in America and the world, in

our view, a necessary but not sufficient part of solving the problems of American pluralism.

If one list does not engender self-respect for enough people or create enough awareness to reduce intolerance and racism, then neither will 10, 20 or 30 lists drawn from a few "representative" literary works, historical texts and context-providing scenarios. Specialized programs that teach about specific cultures are just mimics on a smaller scale of a 12 or 16 year Hirschian curriculum. Although students who decide to take classes from these programs may become more aware of other cultures, will such knowledge lead to tolerance? People who are intolerant and racist have knowledge of other cultures - they just have different characterizations and interpretations of the cultural differences they perceive.

What does this all mean for pedagogy? Our perspective will be sketched out from the top down: the design of curriculum, the preparation of faculty, and what students need to be able to do with their education.

The first implication is provocative because it rejects how we study and teach. The educational system heuristically divides culture into bits in order to study it - we treat art, religion, philosophy, family life, education, human organization and technology as separate parts of culture. American educational systems, like most, have taken many of these heuristic categories and transformed them into disciplines. Although many such disciplines spill over into a variety of cultural categories, they often define themselves in terms of one or more cultural categories.

Multicultural approaches challenge this heuristic categorization because it becomes difficult, we would argue impossible, to understand and appreciate the culturally diverse elements of pluralistic society from the perspective of one or a few particular disciplines. A particularly provocative example of this is Bernal's (1987) theory concerning the effects of ancient Egyptian society on ancient Greek society. He argues for an African influence in Greek culture via Egyptian culture. He supports his position by drawing from the databases of artifacts, language and historical documentation. One of the general criticisms of Bernal's work has nothing to do with its accuracy, but with the fact that he has not been trained in the methodologies of all these lines of inquiry. In other words, he can not know or inquire about the cultural connections between these two civilizations because he is not competent to cross the established disciplines that divide the necessary knowledge.

Such an argument presents a formidable challenge because it focuses on our fundamental way of acquiring and keeping knowledge. In outlining curricular themes for the 21st century Boyer (1992) pleads that we must jump the wall of disciplines: "Would it be possible in the 21st century to stop organizing the curriculum around these dreary and outdated academic subjects, which scholars themselves no longer find useful?" John Armstrong (1994) believes that we are in the process of doing just this as "We're beginning to recognize that God did not create the universe according to the department structure of our research universities."

In our view, multicultural undertakings require multidisciplinary approaches. However, to simply offer a wide range of disciplines in a program does not make it multidisciplinary. A synthetic multidisciplinary approach would merge into interdisciplinarity where each discipline's courses would be linked through a series of underlying concepts or questions (cf. Boyer's (1992) 8 themes). This would allow

each teacher access to information from other courses as they offer their contribution to an integrated curriculum. Harvard University's course "Thinking about Thinking," taught by a philosopher, an evolutionist and a lawyer, provides an example of this (Armstrong, 1994).

What then do instructors need to be able to do? If programs are to be multidisciplinary then teachers need to be able to cross disciplinary lines. They need to be interdisciplinary and the big problem is that few educators at any level have been educated in this fashion.

Finally, we come to the students. What should the student be able to do when the program or course is over? Referring again to Mead, generational differences are cultural differences and therefore teacher-student interaction in the 20th century is to a great degree intercultural. In order to meet the increasing pluralistic and global dimension of today's world along with the qualitatively faster rate of culture change, active engagement of the student is required. This is needed in part to empower the student and to bring a fresh and different (from the teacher's) perspective. It is also necessary in order to develop an appropriate cultural dynamic so that the varying ethnic or cultural views of teachers and students can be brought together.

Active learning pedagogies would seem a solution to the problem of pluralism and intergenerational teaching by providing potential for teacher culture to meet student culture. Allowing student participatory access to course content can work toward making student and teacher discourse mutually intelligible. While faculty set the agenda, student culture can be involved in both theme and method of presentation to define a mutual discourse.

We then come to the big problem of bringing students toward an understanding of culture process and diversity? We believe that this requires students to learn to see others, not as different, but as themselves in different contexts. Processual theory teaches us that the cultural diversity we see in the world is an outcome of general principles. A student's particular history has created many of the particulars in her life; however, much of the structural context she experiences (e.g. her social and economic position, the spatial distributions of employment opportunities) are outcomes of these broader principles. Other people are behaving in response to the same principles in different contexts. Many of their experiences could be like the others, if their situations were exchanged.

By helping students understand the processual foundation for many parts of their lives, it becomes more difficult for them to reject the lifestyles of others. The behaviors of others are just theirs in a different context. As an example, some eighth graders were given the task of selecting a diet. The students were divided into groups and told they could acquire any food item they wanted as long as their menu was sufficient to feed a family of four. The only other constraint was the amount of money each group was given to accomplish the task. The groups' allocations ranged from just a few dollars a day to an unlimited budget. Each student was told to select their own food items and then compare it to the other members of his or her group. Groups with only a few dollars to spend selected similar diets. As group budgets increased, so did diet diversity. Students learned that diets of individuals in different economic positions are in part an outcome of the context and not just a personal choice. The students also learned that they all used similar decision making criteria and that those criteria pro-

duced tremendous diversity in the range of diets selected, with intra-group diversity increasing as economic condition improved. Differences in the diets of other cultural groups were no longer a basis for categorizing and stereotyping. The "other" was just themselves in a different situation.

The more students learn that differences are not barriers, the harder it will become to reject others on the bases of these differences. They will develop a greater awareness of who they are, and an appreciation of not only their heritage but those of the people around them. This strategy has the potential of achieving the goals of multiculturalism by building bridges across differences.

CONCLUDING REMARKS

We must understand that cultural diversity is the result of culture process and history. Multicultural education must not be limited to the matter of recognizing and appreciating other cultures for this can amount to mere tokenism or making cultures into museum displays. We must understand the significance of every American's cultural history and tradition as a part of a dynamic and multifaceted American culture. We can do this if we understand cultures as a dynamic and historic process.

We close with remarks from Henry Louis Gates' view of American Culture and his quote of Michael Oakeshott's notion of education (Gates, 1992:175):

"Perhaps we should try to think of American Culture as a conversation among different voices (and education as) an invitation into the art of this conversation in which we learn to recognize the voices."

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Margaret Mead's Model of Culture Change

	Post-Figurative (Traditional),	Co-Figurative (Modern)*	Prefigurative (Learning)*
Nature of Change	Future repeats past	Present guides future	Future is independent
Rate of Change	Slow and unfelt	Quick	Constant
Ideology of Change	Timelessness, cyclical	Linear	Fragmented
Nature of Learning	Oral, assimilated	Break in continuity of experience	"Immigrants in time"
Direction of Learning	Elders are authority	Peer learning and apprenticeships	World knowledge, instant news
Family/ Socialization Unit	Everyone embodies culture/tribe/clan	Nuclear family	Widely diverse/demographic heterogeneity
Number of Generations	Three	Two	Variable

Adapted from Mead (1970) *Culture and Commitment*

*From Carroll (1990)

Making Connections: Interdisciplinary Senior Capstones for a Core Curriculum

This paper summarizes Otterbein's three-year experiment in "connected learning" through interdisciplinary senior capstones of a liberal arts core curriculum. We tested three courses, designed with different class structures, different pedagogical emphases, and different audiences in mind; the content areas of the courses were: Bioethics (Life Sciences, Nursing, Religion and Philosophy); Engaging Cultures (Speech Communication, Psychology, English); and Gender and Morality (Women's Studies, English, Philosophy). Successful pedagogies in all courses included: the use of case studies; collaborative learning; discussion of personal issues along with content issues; the use of models for coping with new knowledge and with dissonance; and focused experiential components. All these courses found that students developed a greater tolerance for ambiguity, were more aware of the ethical implications of choice, and learned to take responsibility for their own learning. Interdisciplinary courses do provide a structure for "connected learning," in the AAC's sense of applying learning from one disciplinary context to another and relating "academic learning to the wider world, to public issues and personal experience."

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Nationally over the past several years, colleges have begun to examine their curricula from the perspective of the final piece of a student's four-year program. In their report, Liberal Learning and the Arts and Sciences Major (1991), the Association of American Colleges (AAC) developed the concept of "connected learning" as crucial to understanding what should and could happen at this point of closure in a liberal arts education.

The AAC defined "connected learning" in two ways and emphasized that both meanings refer to the ability to generalize learning and to connect across disciplinary boundaries. One meaning "refers to the capacity for constructing relationships among various modes of knowledge and curricular experiences, the capacity for applying learning from one context to another" (14). In general education programs, and in majors programs in a different way, we often pay lip service to the importance of this kind of connectedness, but do not create clear learning structures to guide students in developing it. The second meaning "refers to the capacity for relating academic learning to the wider world, to public issues and personal experience" (14). Again, we believe students should relate these domains, but do not always design curricula that give them time, occasion, support, and credit for doing the hard work of synthesis, relying instead on some kind of intuitively organized developmental occurrence that will just "happen."

Otterbein College has had a four-year core curriculum, multidisciplinary and organized around the theme of human nature, since 1967. By the late 1980's we, too, were puzzling over the best strategies to ensure that synthesis, the work of making connec-

tions, was getting done. Students told us in surveys that they saw the breadth in their liberal arts core experience, but that they were unsure about the inter-connections and integration of courses. Thus, we began to experiment with course structures and pedagogies designed to "construct relationships among various modes of knowledge" and to model the linkage of academic learning to the issues of the wider world of public and private life.

In our three experimental "capstones" for our Integrative Studies program, we created three different course designs and topics, but each was interdisciplinary, focused on contemporary issues and their ethical implications, and came out of the work of a team of instructors. They convinced us of the powerful learning--and empowering learning--that results from supporting seniors in the task of making connections. As a direct result of this experimentation, Otterbein College is currently drafting a model for an all-college senior year experience in synthesis and interdisciplinary learning.

Capstone #1: Bioethics

Bioethics sought to integrate knowledge from the sciences and the humanities. Its subject matter focused on complex situations in biology and medicine that require moral reflection and judgment (some topics included abortion, euthanasia, genetic engineering, and health care policy), and our goal was to help students learn how to reach informed judgments on bioethical issues and defend those judgments. We used two basic ethical theories, utilitarian and deontological, to frame the course work, and students wrote a final essay in which they used one of these theories to respond to and make a decision about a bioethical case study.

We attempted to provide a paradigm for disciplinary diversity through the faculty for the course (Monty Bradley, Religion; Suzanne Stanek, Nursing; Tom Tegenkamp, Genetics; Jeremy Smith, Ethics/English; Michael Herschler, Molecular Biology; and Simon Lawrance, Environmental Science), who were present for all course presentations and shared in the construction of the syllabus as well as presenting course units based on expertise from their disciplines. Eighty-six students, representing 23 majors, completed the course. Both large lectures and small group discussions were included at each class meeting (once a week, 6:30 p.m. - 10:00 p.m.). The discussion groups were deliberately designed to include variety based on age, major, and gender, and scheduling the course in the evening allowed for a mix of traditional-age and continuing studies students.

Many goals for the course were reached. First, we realized we had succeeded in creating an awareness of a variety of ethical issues in the small groups, where the course really came alive. These discussions sometimes became very intense as students learned to take a stand and to argue their positions on sensitive and personal issues. One advantage of bringing students of different age groups together was the different perspectives and life experiences that they brought to the group. For example, a young woman adamantly opposed to abortion discussed the issue with an older woman who had had an abortion with no regrets. This type of sharing made the moral and philosophical issues "take on flesh and blood." When one student commented, "Every night I come out of here depressed," the faculty perceived it as a positive sign: the student was pondering new and disturbing issues. Students often demonstrated their growing awareness by sharing news articles, and in the course

evaluation, many reported a heightened ability to recognize ethical dilemmas and understand that others can logically reach different moral conclusions using the same information.

But the students did more than recognize the issues--they began to analyze and think critically about them, especially as they were forced, in discussion groups, to make difficult decisions using their new frameworks for ethical decision-making. For example, when discussing the allocation of health care funding, students had to make choices about how to spend limited health care dollars. Several refused, wanting to "have it all." These students soon learned, however, that they must make difficult choices or others would choose for them. We could see them struggle to synthesize information and to arrive at moral decisions based not just on emotions, but on thoughtful deliberation about knowledge from a variety of sources and on thoughtful analysis of the ethical issues involved.

Some problems emerged as we taught the course. Some students were nervous and insecure with the course's interdisciplinary structure and found it difficult to work with the teaching styles of so many instructors. Some students had difficulty integrating content from disciplines such as science, economics, and humanities. Students who had a limited science background and had not had one of the two science courses required by the college felt at a disadvantage with science and nursing students. To them, knowledge of science did not seem an important preliminary to ethical decision-making. A few students were not prepared to join group discussion, seemingly "too polite" to argue openly with others. Typically science majors who had not been exposed to this type of learning experience, they were able to share their ideas with the group once they received some private tutoring on group process and discussion format. And some students, even in this class of juniors and seniors, preferred to have "right answers" presented to them, rather than derive their own conclusions.

In evaluating the course we reached several conclusions. First, several teaching methods had been effective. For example, the small groups gave a sense of intimacy and friendliness to the large class and allowed personal sharing. The discussion guides prepared by faculty responsible for the evening's topic guided small group discussions. Audiovisuals shown during lectures not only showed the amazing advances in technology, but more important, the human experience of that technology. For example, the video "Please Let Me Die" vividly depicted how a burn patient was given painful treatment against his wishes. The required paper also gave students an excellent way to practice ethical decision-making.

Second, the course should make changes that would allow more time for thoughtful consideration and discussion of the issues, perhaps by changing the class meeting time from one night per week to two nights, presented in two-hour blocks, one for lecture and one for discussion. The number of topics should be limited to one per week to reduce the reading load and to allow more time for deliberation.

Third, future interdisciplinary capstones should devise more strategies to support students as they experience the discomfort level of interdisciplinary work. The Bioethics faculty recommended having fewer faculty (three instead of six), more integrative planning by those faculty (we met over the summer and weekly during the term, but the course fell too easily into separate blocks), and a consistent format for the course's unit quizzes and exams. These recommendations reflected some difficult

truths. Multidisciplinary is not interdisciplinary. Differences between instructors can make students uncomfortable, even angry. An integrative frame, such as a panel format on a specific topic each of us addresses, would help defuse such tensions while retaining an important part of the course.

Despite the real difficulties--disagreement over issues threatens some students, hard work is required of faculty as well as students--we are eager to teach the course again. Working with colleagues and with interdisciplinary issues was enormously invigorating; the rewards of this teaching far outweigh its difficulties.

Capstone #2: Engaging Cultures: Worlds and Words

Building on the lessons learned from the first capstone, this capstone grew out of almost two years of interdisciplinary conversations about cultural encounters with 11 faculty members. This initial large mix of disciplinary perspectives enriched the summer/fall reading and planning of the three faculty members who decided to teach the course: Beth Rigel Daugherty, English; Chris Reynolds, Speech Communication; and Larry Cox, Psychology. In addition, personal and College commitment to diversity influenced the course's general content--the connections between language and culture embodied in historical and contemporary cultural encounters.

The class of 55 students, in 19 majors, met three times weekly for an hour and twenty minutes. Each instructor had primary responsibility for a particular two-week unit, but we all attended, read for, and participated in each class meeting. During the first two weeks, we concentrated on defining culture and used The Cultural Experience: Ethnography in Complex Society because of its student ethnographies. The next two weeks, we focused on Spain, as represented by Christopher Columbus and others, and its historical encounter with the Americas. Next, we moved to the study of Native Americans, dividing our time between historical encounters and current ones. Then we "turned" Japanese for two weeks, creating as nearly as we could a different culture within the classroom. (Texts for this course "middle" included instructor-created packets of readings on Spanish, Native American, and Japanese cultures, Indian Givers, and Bridging Differences.) Finally, we returned to the United States and its culture/s. Throughout, we worked on how language structures culture and culture structures language.

Because we knew the discomfort level would at first be quite high in our course--many cultures, interdisciplinary content and methods, great variety in assignments with no grades until the end--we worked hard to create a supportive classroom atmosphere. Since we wanted students to take risks and really engage the unfamiliar, we not only explained that the class would sometimes feel chaotic, but we also noted that encounters with difference always felt that way and provided many classroom opportunities for informal questions, feedback, and discussion. In addition, as we worked through models for dealing with "culture shock," we noted connections to our classroom work and reassured students that they themselves would pull everything together by the end. By the midway point, high levels of student participation (including clippings for the classroom walls, comments about the news and its connection to the class, and suggestions for discussion) and few absences indicated our strategies were working. Evaluations at course's end communicated the students' pride at being able to synthesize so much material into a meaningful new whole.

Typically, classes themselves moved: from mini lectures to small group discussions to whole class discussion; from individual reflection and writing to group project work; from experiential activities to assessment; and all the while, the three instructors asked questions, compiled lists and outlines on the board, made connections, revealed their disciplinary biases, interacted with each other and the students, and had a grand time. Student evaluations commented on this classroom synergy.

Students had to complete three main assignments, all of which encouraged integration--the portfolio (which included responses to many activities, such as film viewing and cultural encounters; exercises, such as the case studies; and reflective work, such as a journal and self-assessment narratives); the group project (which encouraged interdisciplinary exchange, creative presentations, and group initiative); and the final exam (which asked students to respond to a case study of a cultural encounter with a thorough analysis and an action plan).

Although our course plans and the syllabus included many experiential components, not until one of our weekly planning meetings did the idea for the most memorable cultural experience take shape. Chris Reynolds led the way, creating guidelines for changing our loose, comfortable American classroom into a more hierarchial and group-oriented Japanese one. Students dressed formally, bowed to instructors, were humiliated if they did not follow the rules, brought gifts for group members every day, stayed on task in their group exercises and projects, and at first reacted with outrage at their instructors' sternness and formality--in fact, they experienced culture shock. But by the time a speaker on Japanese thought came to class for a campus lecture at the end of the two-week unit, students were offended by "outsiders" who came late and in jeans! They had begun, from the inside out, to value a different way of thinking about and doing things.

Student evaluations (the IDEA course evaluation, a supplementary evaluation, and a self-assessment) were generally quite favorable, with the main complaints being the amount of reading and grade anxiety. A large majority of the students perceived the course as a capstone (a course that pulled their Integrative Studies courses together in a meaningful way) and as interdisciplinary (a course that required them to use their own disciplines, learn from other disciplines, and feel a general sense of the connectedness of knowledge). Furthermore, students felt they had met course goals. They learned to tolerate ambiguity; could see their own culture, their own filter of language and tacit knowledge; had become more aware of other cultures; had taken responsibility for their own learning; and had moved beyond both "easy" tolerance and learned helplessness. The work of the class had helped them create a "tool box" to use for future cultural encounters and had taught them how to create models for change.

The Engaging Cultures capstone helped students reach these goals through: its focus, often overt, on the process of interdisciplinary work; its many experiential components; its insistence that students pull together what they already knew and what they were learning; its use of case studies to encourage student analysis of current college and national cultural encounters. Finally, we are convinced that our own willingness to take risks (sometimes hesitant, to be sure!), to step outside our familiar disciplinary frameworks, and to speak from the position of learner rather than expert modelled for students the very nature of connected learning, in all its messiness and joy.

Capstone #3: Gender and Morality

When plans were initiated for introducing capstone courses into the Integrative Studies program, creating one designed for adult students emerged as a primary goal. Adult students comprise one fourth of the population at Otterbein and they are required to take the same Integrative Studies program as traditional-age students. However, adults frequently find some topics of the courses less applicable than traditional students do, and adults often express a desire to use experiential learning in a manner more directly related to their course work.

Based on this knowledge, Mitchell Staude of the Philosophy and Religion Department and Nancy Woodson of the English and Women's Studies Departments designed a capstone course which reflected some commonalities and interests of adult students. The course design aimed to unite some of the major ideas contained in the courses most frequently taken by adult students at Otterbein, such as religion, philosophy, business, women's studies, and literature. The capstone "Gender and Morality" grew out of our decision to use themes that explored the relationships among these courses more closely.

Some of the questions which prompted the connections between the concepts of gender and morality evolved from contemporary issues and cases appearing in our daily lives. For example: Are the cultural and societal institutions with which we interact gender-biased? Have our moral expectations as a society emerged from primarily male-centered philosophies? Do men and women transact daily business from different moral and philosophical perspectives? All these questions challenge existing moral and philosophical tenets as they apply to contemporary gender issues.

The course was offered during spring of 1993 in the evening program format. It met twice a week for two hours each evening and was team taught with each professor presenting materials from her and his respective discipline. The contributions of both professors depended upon which aspects of their disciplines were the focus of the evening's lecture; however, we balanced the course to allow each of us time to introduce new materials, to interact with students in discussing these materials, and to respond to questions and comments from the other. The size of the class, approximately 40, proved ideal for both discussion and group activities.

The opportunity for group activities played an important role in the initial design of the course. Professor Woodson had studied the female adult student population in a grant funded by CAPHE (The Consortium for the Advancement of Private Higher Education) and had discovered that while most of both the adult and traditional-age females classified themselves as intuitive learners who felt more comfortable in group or participatory learning situations, they passively accepted the predominant style of instruction at Otterbein, the lecture format. In addition, the consensus of most contemporary research involving women learners indicates that they are keyed into experiential learning and wish to have less formal, more collaborative classroom environments.

Case studies were a key to creating collaborative learning; they permitted the class to work in groups exploring the connections of current issues and events to historical precedents in moral decision-making. Some of the case studies used in group work included: "The Tailhook Scandal," the rape of Bosnian women, the William Kennedy

Smith trial, "The Spur Posse Scandal," and the Thomas-Hill Senate Hearings.

Because students also required a background in philosophical/moral foundations, Professor Staude allocated an hour of each class for the first few weeks to discuss gender issues in Western philosophical thought; he used Genevieve Lloyd's The Man of Reason: Male and Female in Western Philosophy for this section of the course.

Literature offered another kind of case study, and readings ranged from the ancient, Lysistrata and Antigone, to the contemporary, The Good Mother. The class viewed films such as The Trojan Women, The Accused, and Casualties of War as homework assignments so their content could be integrated into group and class discussions.

A project assigned Week One, entitled "Gilligan's Moral Domain," based on handouts from Carol Gilligan's Mapping the Moral Domain, required students to form groups and defend one of six moral positions suggested by the book. Students selected one way of solving moral/gender issues which seemed most plausible and defended it against criticisms of other groups. This defense took place during Week Ten as a debate and served as a two-hour final exam. This project permitted students to synthesize materials received through lectures, readings, films, and group work; in addition, they could use collaborative methods to reach their own definitions of moral philosophy.

When course evaluations were reviewed, this ten-week project was the most popular component of the course. Students also were most enthusiastic about collaborative methods that involved them in the educational process. By valuing and encouraging participation, goal-setting, and life experiences, adult students were validated in a meaningful manner.

Conclusion

Otterbein College's experiment with capstones reflected its desire to nurture our students' capacities for reflection and synthesis so that they can step into their future, take with them what they have learned, and connect that learning to the conditions and encounters of contemporary life. But the experiment also taught us something about the implications of interdisciplinary learning for a faculty and an institution.

Bioethics. Engaging Cultures: Worlds and Words. Gender and Morality. Different formats. Different size classes. Different constituencies. Distinct personalities. Yet, thrown together at Mohonk, having to put together a team presentation, compelled to share time, space, and ideas, we experienced once again what each team had experienced in planning and teaching the courses, what each student had experienced in taking the courses: interdisciplinary learning ultimately focuses on what we share. Unbeknownst to each other, the capstone teams had all discovered that interdisciplinary subject matter requires interdisciplinary teaching methods. For example, all of us used case studies, demanding that students struggle with real-life issues. All the courses used collaborative learning in some way or another, asking students to form smaller learning communities. All the courses depended heavily upon discussion, encouraging students to participate, share, open up. All three courses taught some pre-existing models for coping with new knowledge or with dissonance; all asked students to develop a tolerance for ambiguity; all asked students to take responsibility for their learning; all used an experiential component.

Thus, interdisciplinary capstones do not help just students see the connectedness of learning. At Mohonk, we were reminded, quite literally, that such capstones energize faculty by opening up new subject areas, demanding new teaching strategies, and giving us structures for talking to one another. Furthermore, when a college invites several faculty teams to create courses, classrooms, and communities out of such disparate parts, it unleashes great energy and power on campus, a power that can only grow as it reaches out to touch more disciplines, more pedagogies, more lives.

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Biographical Notes

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THE COMMON LEARNING COURSE: CONTENDING PERSPECTIVES

William I. Buscemi
Wittenberg University

Six years ago the faculty of Wittenberg University instituted a Common Learning course, required for all first year students during their first term. Wittenberg is a liberal arts college of 2100 students, with 600 first year students each year. Twenty-four sections of the course are taught, with 25 students in each, by faculty volunteers from all departments. All sections use the same syllabus and readings, determined each year by the faculty who teach the course. Topics through the years have focused on issues of race, gender, environment, self-identity, and social responsibility. This is, apart from freshman writing, the only specific course that all students are required to take. One of the goals of the course is to foster a sense of intellectual community by having a whole class of students study the same topics at the same time, in the hope that conversations will continue outside the class room, thus overcoming the effects of departmental isolation. Another goal is to engage a portion of the faculty each year in a dialogue on matters of pedagogy and curriculum, as they meet to hammer out the annual syllabus. A budget is provided for guest speakers, faculty retreats, weekly lunch meetings for teachers, and secretarial support. One faculty member serves as the course coordinator, and is compensated by released course time. I have been involved in the course since its conceptualization, have taught it twice, and have recently been appointed the new course coordinator.

The Common Learning course, because of its prominent and unique position in the curriculum, forces the faculty to face up to crucial questions concerning the nature of education. The fact that all students are required to take the course, immediately upon entry into college, inevitably conveys a powerful message about what education should be. Prior to the initiation of this course, such crucial educational questions could be side-tracked and blurred by paying lip service to catalogue statements, and by pointing to the curriculum itself which, like curricula everywhere, is more a product of staffing and compromise than a reflection of academic purpose. It is not surprising, given the prominence of the course, that it has been the focus of conflict between those who hold opposing views concerning the nature of learning and teaching. Having been involved in many battles to shape the direction of the course, I shall attempt in this paper to analyze the most important of these struggles, describing and defending my own educational vision along the way. An understanding of these struggles can, I believe, help to illuminate the perspectives involved in various types of educational reform.

Why, many critics of the course have asked, should students pay high tuition fees, only to take a course in which the instructor is teaching outside her area of expertise? In this view, teaching is seen as a process of transmitting skills and facts, in order to prepare students for continued learning, and for life. Knowledge is thought to be gained cumulatively and sequentially, as blocks in a building. The boundaries of mainstream disciplines, and such disciplinary categories as depth and breadth, are

assumed to coincide with the dimensions of reality. A smooth division of labor is assumed within and between disciplines, and student course scheduling is planned accordingly. From this perspective, the statement made by the Common Learning course is problematic, both because it challenges the notion of expertise, and because its content is not necessarily chosen to serve as a foundational building block in the sequence of courses to be taken later. Resistance to the course among faculty has been greatest in the natural sciences, probably because those disciplines are themselves constructed along foundational and sequential patterns. Resistance is also encountered among some new students and their parents who, especially in times of economic recession, expect colleges to teach the skills and information helpful to building careers, and who therefore look askance at courses taught by non-experts with suspicious-sounding titles. Vocational concerns also enter the minds of some faculty members, particularly the untenured, who are reluctant to volunteer time and energy outside their disciplines, when tenure and promotion are more likely to depend on performance within one's own field.

In order to compensate for the perceived problem of teaching outside one's field, faculty members scheduled to teach the course have, in the past, spent considerable time in preparation, attempting to master the materials to be assigned. Weekend retreats are held in the months prior to the course, during which those of us most expert in the topics at hand lecture to the rest of us, who in turn take careful notes which are used as the basis for teaching students in the fall. In this way the notion of expertise is preserved, if only at second hand.

The content of the course, while varying across the years, has always been interdisciplinary in scope. The interdisciplinary approach, however, while often seen as a means of overcoming disciplinary specialization, has often had the opposite effect, of reinforcing that specialization, and reinforcing conventional assumptions overall. A common practice in teaching such courses is to bring each discipline, in its turn, to bear upon a specified problem, with the expectation that the cumulative contributions of each will solve the problem as a whole. When considering the problem of rainforest destruction, for example, earth scientists are called upon to document soil fertility, economists trace the trade links between Brazilian cattle ranchers and American fast food chains, and chemists report the greenhouse effects caused by slash and burn techniques. Discussion must wait until these reports have been absorbed, by which time the scope of controversy has been considerably narrowed, and the task remaining is largely that of integrating data from the different disciplines. The gain is said to be that of showing the manner in which the disciplines relate, which relationships are not easily seen when taking departmental courses one at a time. In this way, it is felt, Common Learning helps the student to "integrate" her knowledge, and to see it as linked to problems in the real world, which world is itself, not neatly divided by disciplinary boundaries. Such an approach, however, does little to challenge the authority of established disciplinary expertise.

The views described above, which emphasize expertise, sequential knowledge, and interdisciplinary division of labor, can be called "foundational." There are, of course, foundationalists of various sorts; moral absolutists, like scientific positivists, view education as essentially a matter of transmitting truths. Both see the Common Learning course as a vehicle for teaching rules and facts. For the moralists, the course has

been seen as an opportunity to "raise awareness" concerning problems of race, gender, poverty and the environment, and to "challenge the comfortable bourgeois assumptions" which our mostly affluent students bring to college. Interestingly, these moralists of the left have tended to see themselves as objective, and even scientific observers. Empirical data are provided to show, beyond argumentation, the errors of prevailing social practices, e.g. with regard to discrimination and environmental destruction. Views to the contrary are met with disbelief; how, after all, could a case be made for polluters and bigots? Conservative moralists typically counter, not with the demand to substitute conservative values for liberal, but to eliminate indoctrination altogether, and to convert Common Learning into a "core" course which would prepare students for later courses, and for life. The topics most often recommended for such a core course center upon the culture, history, and canons of our own civilization.

In the remainder of this paper, I shall attempt to explain my own educational vision, my reasons for disagreement with certain aspects of the Common Learning course as it has developed in the past, and my hopes for its future. My own view is influenced by such post-foundationalist and postmodern writers as Thomas Kuhn, Richard Rorty, Jacques Derrida, and Michel Foucault, and by the pedagogical works of Gerald Graff, Paolo Friere, and Henry Giroux. As I see it, one of the goals of education, and of this introductory course in particular, should be to show students that established disciplines can be questioned. Students entering college are too often overwhelmed by the massive appearance of the educational establishment. Everything conspires to awe and intimidate: the authoritarian architecture of campus buildings, the miles of library book shelves, the importance and finality of test scores and grades, and the spectacle of faculty in robed procession. My inclination would be, instead, to challenge, at least initially, the mainstream disciplines, rather than to reinforce them, and to see knowledge as a matter of human construction, influenced inevitably and unavoidably by human interests. The goal should be, perhaps, not so much to integrate as to disintegrate; the incorporation of different disciplines within a single course should be as much to show the contradictions within and between them, as to show them as smoothly supplemental. In matters of morality, though my sympathies are with the left, I would prefer to deal with reactionary attitudes by creating an atmosphere of dialogue in which such attitudes are seen as social constructions, and thus stripped of the absolutist premises on which they commonly depend. I would also resist the effort to convert Common Learning into a core course, fulfilling a pre-defined role in the standard curriculum. Soon enough, and for the remainder of his college experience, the student will be tracked into pre-defined and carefully planned sequences. It should be the aim of this one course, at least, to hint at the limits of, and the possibility of alternatives to, those courses.

The ideal topic for the Common Learning course, from my perspective, would be one that is of great interest to students and faculty alike, that is of pressing social importance, and yet one that resists easy solution through established methods. Students would, upon wrestling with such issues, discover that solutions to important issues usually require, not the application of fixed rules to given facts, but the revisualization and re-balancing of rules and facts, with the goal of reaching an optimal, but always arguable, new balance among diverse commitments. In this process, foun-

dations are revealed to be, not absolute, but more or less weighty, and open to possible adjustment. This, it seems to me, reveals the nature of all learning, including the most advanced, which, seen close up, includes more of compromise and balancing than is made evident in the final polished report. Plunging students into such problem-situations would, I contend, be the best preparation for further inquiry and for life, where problems and solutions occur, not as pre-defined exercises in a text-book, but as indeterminate experiences requiring constructive interpretation and judgment. The give and take of conversation itself serves to model the process of knowledge construction. The goal, in this introductory course, should not be that of teaching skills and facts, but to thrust students into problem-situations, where they are forced to make the best sense of things that they can.

The fact that the Common Learning teacher presides over a course outside her discipline is, in my view, an advantage. It is good for students to see teachers struggling as co-learners, and to have the responsibility for learning thrust back upon the student. Readings should be accessible and discussable, so that students can interpret and explore on their own, without the need for frequent explanations by the teacher. This reveals the nature of all learning; even information conveyed by lecture depends, ultimately, on the interpretive judgment of the listener. There is no escaping responsibility for the construction of one's own knowledge. To those who object that such student-centered learning will limit readings and comprehensions to a shallow level, I would answer that it is worth sacrificing some sophistication, at least in this one course, in order to put students on notice that learning is not a spectator sport.

It is part of conventional wisdom that education helps us to overcome our prejudices and to see the world more objectively. The university, in this view, is seen to be, at its best, a haven from the passions buffeting the outside world, and therefore as the best place to bring calm reason to bear upon the problems of that world. I would argue, instead, that our knowledge of reality is always and unavoidably mediated by our interests and commitments, and that failure to recognize this only serves to privilege those interests which succeed in presenting themselves as objective. The teaching task is not to get students to purge their interests, but to help them understand and articulate those interests, to see how their interests shape their perspectives, and thereby to understand the role of interests in the construction of knowledge generally. When allowed to locate and map their own interests in relation to those of teacher, text, and discipline, students are empowered and motivated to join in the conversations of the academy, and the wider society.

Critics charge that a pedagogy which discredits conventional knowledge will lead to student cynicism, and ultimately to moral, intellectual, and political nihilism. I would argue, however, with Richard Rorty and John Dewey, that it does not devalue established institutions and achievements to see these as fragile constructs created against great odds, rather than given realities. It does not devalue the mainstream disciplines to see that they, like species in evolution or works of art, represent only specific solutions to specific problems, that they have limitations, and that alternative resolutions are possible. Temptations to easy relativism are countered by the practical necessity that we choose, and defend, the principles on which our lives depend. Cynicism and alienation are caused, rather, by authoritarian and didactic teaching styles which convince students that they are merely passive and powerless recipients in the

educational process. What is needed is not a more rigid adherence to facts and rules, but to draw students into the conversations and controversies of the academy. The university, says Gerald Graff, unlike the auto repair industry, thrives on controversy. Students engaged in discussion are likely to be more personally committed, socially involved, and morally responsible than their more passive classmates. The university is best seen, not as a storehouse of knowledge to be transmitted, but as the arena for a conversation in process.

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THE PROCESS OF GENERAL EDUCATION REFORM: AN IMPOSSIBLE DREAM...ALMOST!

Thomas Curran, David Curtis, Frances Grodzinsky
Sacred Heart University, Fairfield, CT

1. The Beginnings

Curriculum review and reform are always threatening, particularly if the curriculum is the general education portion of the university's academic offering, particularly if the liberal arts departments see general education as the only area of the curriculum wherein they can promote their principles. For those involved in the process of general education review and reform, the experience is heady, representing a unique opportunity to design an educational program that is ideal. But idealism carries with it dangers, and the dream of an ideal educational program can become impossible to realize, unless the anxieties implicit in change are met squarely and practically. What follows is one university's attempt to make a new general education curriculum, to make its lamb of idealism lie down with the lion of reality.

Sacred Heart University defines itself as a comprehensive university in the Catholic tradition, epithets that suggest a tension so basic as to imperil any kind of curriculum review. Its "comprehensiveness" implies room for credit hour-laden professional studies; its "Catholicity" mandates a strong liberal arts emphasis. Further, its student body of career-oriented and often underprepared learners must impact on the kind of general education curriculum it can maintain. These very tensions, however, enforce creativity among reform-minded faculty and administrators; one understands that general education reform is in some respects a struggle for the soul of the university.

The simplest explanation for why the review was begun in the first place is that the last university strategic plan (1989-94) called for it and that a faculty survey showed strong support for it. Moreover, a faculty and administration team reported after attending a workshop on liberal education sponsored by the Lilly Foundation that the time for curriculum review was at hand. The rationale for review included in that report focused on (1) the curriculum reviews being undertaken by other universities and the reports on general education being issued by NEH, AAC, and the Carnegie Foundation; (2) on the relatively long period (about 20 years) our current general education curriculum had been in place; (3) on the accelerating pace of change in our environments (university, United States, world; technological, social, political); and lastly (4) on the intellectual excitement such a review might have on the Sacred Heart community.

Released in August 1991, the Lilly team report prompted the Faculty Senate to appoint a task force to begin the review process. This faculty committee began its work in the fall of 1991. It examined such matters as the rationale for our current general education curriculum, its relation to the university's mission, the character and needs of our students, the concerns of the faculty, the definition of general education. This was a year of "venting," a necessary, though somewhat unproductive, process, but one that all review probably starts with. Three problems that received constant attention were the size of the general education curriculum (too large, some felt, just right, others argued); the obvious deficiencies in content of the model then in

place (no computer courses, no non-western courses, no compulsory study of foreign language, etc.); and the critical balance between the teaching of "skills" and the teaching of "knowledge" (balance?--more skills needed! more knowledge demanded!). And so the first year ended: much had been discussed, little had been achieved.

At this point the Academic Vice President, satisfied, yet desirous of moving the process along, selected a smaller group from the committee and asked them to work throughout the summer. He provided stipends, so that our attention might be undivided, and charged us to study the literature on general education review and to formulate a model to focus faculty discussion during the next academic year. The small group worked swiftly and productively, kicking around various models, some our own, some borrowed from the work of others (Lynne Cheney's 50 Hours provided a model, for example, that seemed very near to what we wanted). We worked to articulate principles that would guide our design--an absolutely crucial step in curriculum reform--and we designed a survey to measure the overall feeling the community might have about general education.

Among the principles that emerged from our studies were the following; General education should be:

1. accomplished in 40 credit hours,
2. thematic, non-discipline-specific,
3. vertical,
4. coherent,
5. graduated in skill-deployment,
6. "capped" by a culminating experience.

The danger, we perceived, was to publish these ideals in the absence of input from the community at large; we especially did not want to lose contact with the faculty, and here the survey was of great help. Faculty and administrators were polled to determine their perceptions of the general education requirements then in place and the weaknesses and strengths they saw in them. We also "floated" our principles to measure their acceptability.

2. The Survey and Faculty Meetings

Almost 50% of those surveyed returned responses. These have proven invaluable to the committee, pushing us in directions we initially thought little about, enabling us to resist the calls of certain constituencies to move in directions the community-at-large was wary of.

We examined carefully those areas where overwhelming numbers suggested change or no change. The inclusion of a course in computer literacy, for instance, found favor with 94% of our respondents; modern foreign language with 93%--and neither of these was part of the general education curriculum then in place. Most courses which were part of the curriculum received high percentages to be continued or received even slightly more attention. But a significant number of respondents called for a reduction of emphasis on philosophy and religious studies; and the proposed inclusion of theology (not currently part of the general education curriculum) earned a strongly negative response.

Generally, we found that most respondents favored a curriculum model that would contain both core and distributional courses; most advocated a curriculum of between

40 and 60 credit hours. These responses suggested fundamental content with the structure and size of the current general education curriculum. Most favored interdisciplinary studies, but wanted no directives about teaching methods. Overwhelming numbers asked that courses in non-western cultures be taught and that contemporary social issues be addressed in the new curriculum. There was little support for "service" activities as a part of the academic curriculum. Finally, there was strong support for a more "coherent" general education experience.

Thus, we concluded that certain basic propositions had the endorsement of a significant portion of the community and particularly of the faculty: (1) that the general education curriculum plays a vital role in educating our students; (2) that it needs to be re-evaluated; (3) that it can be and should be improved.

The committee had found none of its basic principles to be obnoxious and so we began to work towards a model that would grow out of them. That would mean a general education curriculum that would be vertical, interdisciplinary, sequenced, and theme-directed. It would incorporate these elements into a more coherent educational experience for our students. We determined to continue the emphasis on skills courses, particularly in the freshman year, and began discussion of a senior capstone course. We recognized that mandatory courses in computer literacy and modern foreign languages could not be denied, and we committed ourselves to providing a course in non-western culture(s) and infusing "globalization" throughout the curriculum. We decided to "hold the line" on requirements in philosophy and religious studies, despite some pressure to increase them. We felt bound to writing-across-the-curriculum and the reduction in class size it entails. Finally, we felt that the community's interest in general education allowed us to insist upon its rising from the posture of "servant to the major" and taking its place alongside the major as equal in importance.

Such were the ideals of the committee. Then we began to meet with faculty disciplines, to display our models, and suddenly those ideals were under assault. In truth, meetings with faculty groups were a continuously valuable experience. Committee members gained tremendously from "walking in another's shoes." Some of our more idealistic proposals, we discovered, through the scrutiny of the faculties that would be involved in implementing them, simply would not work. And so we abandoned them. The faculty-at-large served to keep the committee realistic, reminding us of who we are, who our students are, what the university's economic realities mean for general education. Too, we became more sensitive to the fears that many liberal arts professors have in response to burgeoning business, accounting and professional studies majors. We tried to allay those fears, without sacrificing general education on the altar of territoriality. Meetings with the faculty reminded us that curriculum reform is not an abstract thing; it involves jobs, job-quality, and professional self-esteem. It was crucially important for our small group to sit down in a "backroom" and discuss a new general education curriculum; it got us off the ground. But it was equally important to find ways to involve the entire faculty in the process, if only to get us back down to the ground once more.

3. Where We are Now

Meetings with faculty groups and within the committee itself continued all through the 1992 academic year and into the summer. Among the principles that had come

under attack, none was more distressing and comprehensive in its impact that the 40 credit hour curriculum. With a current general education curriculum of some 50 plus credit hours, we realized that to add some 15 additional credit hours in the form of courses on computer literacy, modern foreign languages (at least 6 credit hours), non-western cultures, and a capstone course would be to make the general education program unwieldy. Yet to subtract sufficient credit hours to reduce to 40 hours and still add these new courses was impossible. We came to understand that given our students' needs in the skills arena and the deeply-felt faculty concern that whole areas of knowledge would be jeopardized by such reductions, a 40 hour general education curriculum simply couldn't happen. Reluctantly, we rethought this principle and decided to aim for a curriculum of roughly the same credit hour size as the one then in existence. Still, cuts would have to be made, never easy when one is talking about disciplines whose upper-level offerings are in no small part sustained by their inclusion in the general education curriculum.

Interdisciplinary studies were perceived to erode the integrity of the disciplines. Many faculties worried about "watering down" courses and coming at issues from no approach at all. As a corollary, some argued against a theme-directed curriculum. It seemed shallow to some and forced to others. And many introductory courses served to promote the major or were needed as supporting courses for majors--such as political science to social work, psychology to nursing, math to chemistry. Many faculty members doubted the ability of the university to provide resources of time or money necessary to their "retooling"; others had no interest or desire to retrain. In the face of such opposition, the committee de-emphasized its "interdisciplinary" and "thematic" ideals, but insisted that the general education curriculum not be used principally to encourage interdisciplinary, theme courses, under the aegis of a permanent general education curriculum committee, without, however, mandating them.

Sequencing of courses was attacked by faculties who felt their courses should be privileged as "most" basic to successful learning, but on this point the committee countered that everyone could not be first and that the skills of language and numeracy had to be in place before sophisticated learning could occur.

Many persons averred that if we were serious about exposing our students to non-western culture, we would have put more than one course in the curriculum model. As these were often the same persons who took us to task in terms of the size of curriculum, their admonishment presented us with a dilemma: how to do all we should for our students and still allow them the flexibility to pursue their majors and take electives. Our recommendation was that all general education courses be appreciative of contributions from non-European and non-American cultures; it was the best we could do.

Verticality was assailed by professional studies programs which need virtually the entire junior and senior years for various kinds of practica. This problem is one of a number yet to be resolved, but the committee stands solidly behind the idea of a four-year general education curriculum, support for which has come from all segments of the community.

Finally the capstone course presents difficulties for many disciplines that would prefer that experience be grounded in the major. Initially, the committee saw this course as one dealing with ethics and contemporary social issues. However, a number

of faculty members who would naturally teach such a course disavowed interest. A decision on the course and its precise nature has yet to be worked out.

Other issues to be dealt with persist: Should proficiency in our exposure to modern foreign languages be our goal? If the former, at what level would proficiency be pegged? If the latter, what end does mere exposure serve? If team-teaching is too expensive and if interdisciplinary courses are undesirable, how can the kind of generalist experience implied in the term general education be achieved? Is the tandeming of courses possible? Is it efficient? And if so, in what areas? And how shall the training necessary to such an endeavor be effected? How do transfer students and the 25% of our freshman class who require remediation fit in the general education program?

All of these questions and many others that curriculum reform has raised can be answered. Patience is needed and compromise. Faculty members and disciplines that dig in their heels and will not even look at the possibility of doing something new have little or nothing to bring to the process of resolution. Nor must the committee which has invested so much time and energy in curriculum reform insist that its way is the only way.

An instance of this. One of the most vexing issues being faced by the whole university is how "distributional" general education should be. Rather than dictate to the faculty that course X is acceptable and course Y not, the committee has resolved to adhere to guidelines and let the disciplines meet them. For example, we believe all general education courses should:

(1)deal with the human experience
(2)involve significant writing and oral communication
(3)not be principally an introduction to a discipline.

Any course, we say, which meets those criteria should be eligible for general education designation. Again, however, the committee sees the reform of general education as a great opportunity to develop new courses and hopes the faculty, even the most reactionary elements, will come to share our enthusiasm.

Upon completion of the consultation process--still ongoing as we write--and the ultimate approval of the new general education curriculum, the committee will recommend that a permanent standing general education curriculum committee be formed. It will have the task of ascertaining how best to infuse the principles of general education that have emerged from our three-year labor into the components of the curriculum. Working with department chairpersons, it may have to pick and choose from among many offerings. It will certainly need to publicize general education courses in a timely fashion so that students can make intelligent course selections. It will need to foster an advising system that ensures those students in the professional studies majors get into the right courses at the right times. It will advocate for the expenditure of faculty development dollars, so that the curriculum might maintain its vitality. It will constantly review the general education curriculum to make sure our students and education are being served.

4. Lessons

A process so long and intense as curriculum revision must finally teach us many things. Mistakes will be made; moments of breakthrough will occur. Based upon the

lessons we learned, we offer some advice you may find useful when and if you undertake general education curriculum renovation:

1. Know your university from top to bottom. What your students need and desire from education, what your colleagues are willing to and capable of pursuing, what the administration will support, how the mission can be served, all influence the kind of curriculum your committee can shape.
2. Set up a small committee of like-minded people. The issue is not to achieve lockstep uniformity, but to achieve anything at all. Arguments will arise and some of them will be protracted and acute. What you do not need are the endless complaints that inevitably occur when large numbers of faculty gather in one place. Or the intractable, dilatory tactics of a colleague who is out of sympathy with the whole process of review, who would rather leave everything as it is.
3. Work from principles. In the final analysis, the curriculum must grow out of principles. Working towards particular models or themes in the absence of such an underlay will subject you and your colleagues to accusations of fadism and worse. Principles, once agreed to by all, are not subject to easy dismissal. If you want your work to be taken seriously, it must stand on solid ground.
4. Be idealistic. By the same taken, don't settle for anything but the best. Thoreau said to build your castles in the air; that's where they belong. There will be enough nay-sayers and cynics to keep you honest, but you may never have another opportunity to affect the educational climate of your school. So go for it.
5. Keep in touch with the faculty. These are after all the persons who will have to make do with what you produce. And because their interest is so vested, they will show you all the pitfalls of your proposals. If they are honest, and most are, they too want the best curriculum possible. There will be, to be sure, some defenders of "turf" merely, so don't surrender on principles too readily. But don't be afraid to listen, either. The faculty is a resource for wisdom and perspective; use it.
6. Be patient. General education curriculum review and reform is a long process. Tempers get short, nerves frayed. Time and time again you will be tempted to throw up your hands in despair. Every compromise exacted feels fatal. But with time and preparation, your ideas just might catch on. Then you'll have everybody talking about education. We are at that stage now; it is most satisfying. And best of all, something good may come of it.

The Proposed General Education Curriculum

Freshman Year:	Languages for Learning	18 credits
GE 101, 102	Rhetoric	6
GE 103	Computer Literacy	3
GE 104	Math	3
GE 105, 106	Modern Foreign Language	6
Sophomore Year:	Foundations of Thought	6 credits
GE 201	Philosophy	3
GE 202	Religious Studies	3
	Components of Culture	12 credits
GE 203	Western Civilization	3

GE 204	Western Literature	3
GE 205	Art/Music/Film is Western World	3
GE 206	Modern Culture & Society	3
Junior Year: Dimensions of Human Experience		13 credits
GE 301	Behavioral & Social Sciences	3
GE 302	Humanities	3
GE 303	Physical/Natural Sciences	4
GE 304	Religion/Philosophy	3
Senior Year: Capstone		4 credits
GE 401	Non-western Culture	3
GE 402	Senior Seminar	1
Total credit hours		53 credits

A. GE 201 & 202 and GE 203 & 204 may be tandemed.

B. Students must elect to do a research project in any one course during both their sophomore and junior years.

C. Students may test out of any GE 100-Level course.

D. Students do not have to take the particular GE 300-level course their major falls under.

Biographical Notes:

Dr. Thomas Curran is an Associate Professor of History, Dr. David Curtis is an Associate Professor of English and Dr. Frances Grodzinsky is an Associate Professor of Computer Science. All served as members of the General Education Review Committee at Sacred Heart University.

Revolutions in Science: Making Connections Across the Core Curriculum

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The Moravian College Core Curriculum consists of seven integrated courses designed to meet the general education requirements of approximately one-quarter of the entering freshman class at the college. *Revolutions in Science* is the fifth course taken by students in this curriculum, generally during the first semester of their sophomore year. As such, it is the only course oriented toward the natural sciences in the curriculum, and for many students the only science course which they will take during their entire collegiate experience. Broad in scope, the course presents an overview of the major scientific revolutions from the ancient Greeks to contemporary science.

Since the purpose of the Core Curriculum is to present to students an integrated set of common learning experiences, it was a particular challenge for us to develop an historically based course which met this criterion and at the same time instruct them in the major ideas and theories of modern science. Because students in the Core Curriculum enter this course having taken four previous Core courses, we felt it important to build upon these prior experiences. Making explicit connections to these courses, *Macrocosm/Microcosm: Community and Individual in Western Culture* (2 terms), *Quantitative Problem Solving* (1 term), and *Communications* (1 term) became a major goal in developing both the lecture and laboratory portions of our course. We felt that only in this way could students begin to see the connections between disciplines and appreciate how these areas of human knowledge and experience are indeed interrelated.

The Historical Context

Students enter *Revolutions in Science* having taken a two term course in Western culture during their freshman year. *Macrocosm/Microcosm: Community and Individual in Western Culture* develops the major themes of history, art, music, philosophy and religion over the past three thousand years, but provides little integration of the roles which science and technology have played in this development or, conversely, how these areas of knowledge have affected the development of Western science. To have made such an integration into this two-term course sequence would have been difficult given the nature of the material, the faculty involved, and the constraints of time. Because of this, it was our intention to address the roles which science and society have mutually had on one another in designing our course in science. We thus chose as our organizing model the placement of science and its intellectual revolutions within the context of evolving Western culture. In this way we could develop selected principles of science while integrating these developments into the broader context of history.

The course is divided into three sections, the Astrocosm, The Changing World, and the Microcosm, which collectively follow the historical development of the major ideas of science. In the Astrocosm, humankind's attempts to understand the nature of

the universe is the primary focus of study. From early Greek astronomers such as Aristarchus and Eudoxus, through Ptolemy, to later astronomers such as Copernicus, Brahe and Kepler, students learn how science in general, and astronomy in particular, developed before and during the scientific revolutions of the Renaissance. Finally, through the works of Galileo and Newton, the connections are made between astronomy and the emerging science of physics. The Astrocosm closes with a look at how modern astronomy continues to push back the frontiers of our knowledge of the universe.

Evolutionary biology and geology are the topics of the second portion of the course, The Changing World. Quite naturally, Darwinian evolution, the shifting paradigm from a static to a dynamic view of nature, and an expanded temporal sense form the foci of this material. Evolutionary ideas are explored from their early developments through the influences of 20th century genetics. The Modern Evolutionary Synthesis is presented, along with such current ideas as punctuated equilibrium and the neutral theory of molecular evolution. Connections with the concurrently developing science of geology are made through discussions of stratigraphy, relative and absolute dating, and the development of the modern theory of plate tectonics. Finally, an examination is made of the history of life on earth and, in particular, the evolution of the human lineage.

The focus of the third section of the course, the Microcosm, is on the molecular, atomic and sub-atomic level. The development of chemistry, particularly the nature of the atom and the elucidation of the periodic table of the elements by Dimitri Mendeleev, is a major portion of this section. Additional early 20th century discoveries leading to an understanding of nuclear chemistry and physics are also explored. Finally, the biochemical and molecular nature of the hereditary material are developed via the story of the race to discover the structure and function of DNA. Explicit attempts are made to connect this understanding of how genes work to the earlier material on evolutionary biology. Finally, the course comes full circle, ending on an astronomical application, with discussions on the origin of life on earth and the search for extraterrestrial life in the universe.

While teaching science in historical context gives us an explicit connection to the *Macrocosm/Microcosm* course on Western culture, it is not in itself a unique way of teaching such material. We, thus, attempt in this course to go one step further in making connections with the broader ideas of how both science and society affect one another during their simultaneous evolution. One specific case study which we use centers on how science, through Social Darwinism and the Eugenics Movement, shaped societal perceptions and attitudes on race in the early 20th century. Students are drawn to the fact that many legitimate scientists fostered the theories which ultimately led to such travesties as restrictive immigration laws, forced sterilizations of the mentally ill, and finally the Holocaust.

Conversely, the influences which society exert on science, particularly its instruction in schools, are explored through an examination of "scientific creationism." Questions on the nature of scientific theories are raised, as well as what is meant by "truth" in different ways of knowing. Students are asked to examine their own beliefs on this subject with an eye toward determining whether inconsistencies in their views toward evolution are based more on an inadequate understanding of science or mis-

conceptions on what some of their own religious tenets say about the subject.

It is through such case studies that we feel most unique in presenting students with connections to earlier material developed during their Core Curriculum experience. The message which we wish to convey is that science is not an isolated enterprise, but one of exploration carried out by men and women who themselves are human and are influenced by the contemporary society around them. For better or worse, science has deeply affected the course of world culture and, in turn, has been greatly affected by it.

The Quantitative Connection

During the planning phase of *Revolutions in Science*, the Core science team made a commitment to the development of laboratory experiences for the students that met two fundamental criteria: 1) the laboratories had to be unique to this course, and 2) the laboratory topics had to relate to the lecture material and/or to the Core experience in ways that were conspicuous to the students. The fulfillment of the first criterion entailed the development of new laboratories specifically for this course or the incorporation of laboratories from other courses, provided that they would no longer be given in those courses or that they would be modified to fulfill the unique role of *Revolutions in Science*. The fulfillment of the second criterion, thematic relationship, could occur within the course relative to material presented in the lecture component or to information covered within any of the Core courses which preceded this science course.

Revolutions in Science has been taught during three successive years (Fall terms 1991-93). The faculty team was composed of four members during the first year, but one member withdrew prior to the second year. All original and continuing members of the team were involved with the planning and implementation of the laboratory component of the course. The laboratories have been modified to varying degrees between each offering of the course; the descriptions of the laboratories given below represent their configurations during the most recent year, as well as our intentions to make changes for the next offering. Brief descriptions of all laboratories are provided, but emphasis is given to one, the fossil study, because of its unique emphasis on quantitative analysis and reasoning skills.

Galileo Experiment of Motion on an Inclined Plane. This laboratory simulates the experiment Galileo performed to determine that the spaces traversed by falling objects are to each other as the squares of the times. The laboratory occurs simultaneously with, or immediately following, the historical development of astronomy and mechanics in lecture. Students roll billiard and bocci balls down a 12-foot long, one inch wide, "U" shaped aluminum channel. They measure elapsed time via water clocks, much as Galileo did, but ours are constructed from plastic flower pots. The water is allowed to flow through a thin tube at the bottom of the pot when the ball is released, and the flow is stopped with a finger when the ball has traversed predetermined distances. Thus, the weight of the water is proportional to the elapsed time. Students use their time and distance measurements to evaluate Galileo's conclusions. One student group uses an apparatus which has been made as nearly as possible to the specifications of Galileo's original inclined plane; it is made of wooden planking which measures 3.5 inches thick, 11 inches wide, and 22 feet long. Embellishments to the basic experiment for the coming year involve providing 1.5 inch diameter balls

made from materials which vary significantly in density so that the effects of weight can be more easily investigated.

Measurement of the Height of Mountains on the Moon. The lecture context of this experiment is similar to the previous experiment. Students use reproductions of Galileo's drawings of the lunar surface and his numerical techniques to measure the heights of lunar mountains. They then use photographs taken through the college telescopes, along with improved analysis techniques, to make simple determinations of other lunar features. Lastly, they perform a similar analysis on space photographs which were taken on the Apollo missions to the Moon and which were obtained from the National Space Science Data Center. All measured lunar features must be identified by reference to lunar maps which are provided. Because the lunar maps are stereographic projects, and the photographs are orthographic projects, students must be careful in their use of pattern matching to identify lunar features.

A Study of Optical Spectra. Students use a spectroscope to measure the angular relationship between the slit and the image on a first-order emission line from a known emitter of light. With this information they compute the diffraction grating spacing. Once the spacing is known, students can determine the wavelengths of emission lines from incandescent substances which are unknown to them. They compare the computed emission lines for their unknown sample with a tabled listing of bright emission lines for several identified elements to establish the probable identity of their sample. The context of this laboratory relative to lecture is two-fold: dispersed light contains information important to the astronomical quest, and, later in the course, dispersed light contains information which allows us to delineate molecular and atomic structures.

Ecological Field Trip to Jacobsberg Environmental Education Center. Located only 20 minutes from campus, Jacobsberg Environmental Education Center provides a field site which is ideal for the illustration of biological communities and the topic of succession. The lecture context relates to the second section of the course, The Changing World. The ideas of dynamic equilibrium and changes through time are considered on several different time scales: the current biological setting reflects the present and near past, the topographic setting represents a more distant past, and the stratigraphic setting represents an ancient past. All are in simultaneous evidence at this location.

Alchemy Laboratory. Students reproduce the weight loss experiments of Joseph Black which were important to the demise of the phlogiston theory of heat. Compounds are heated and treated with acids to show a measurable weight loss. Students are not provided with the modern chemical names for the compounds, only the names used at the time of Joseph Black. During the decomposition of the compounds, students are given a set of cards which contain several physical and chemical properties of the elements, one card per element. Arbitrary symbols are substituted for the element names. Students arrange the cards into a table of periodic properties, and they use the table to predict several missing elements, as well as the properties that the missing elements would possess. The education context is to introduce and reinforce the final section of the lecture portion of the course, the Microcosm.

Nuclear Radiation Systems. Students use computer-monitored nuclear counters to investigate the penetrating properties of alpha, beta and gamma radiation. In addi-

tion, they design an experiment to test the absorptive properties of different materials. Finally, they investigate the effect of distance on the received gamma radiation and determine the half-life of a radioactive substance. The laboratory relates to The Changing World because of the role of the half-life concept used in age dating techniques, and to the Microcosm because of its importance in determining the structure and properties of the atom and its constituents.

Biological Effects of Radiation. Students employ sterile techniques to investigate the mutagenic and lethal effects of ultraviolet light on bacteria which are grown on solid agar substrate. Students design their own experiment, and, one week later, collect the data to quantitatively evaluate their results. This laboratory relates to the importance of mutations in The Changing World portion of the course, as well as the nature of the hereditary material portion of the Microcosm. We hope to introduce radioactive sources into this laboratory during the next year to better coordinate this laboratory with the preceding one on nuclear radiation systems.

A Biometrical Study of a Suite of Brachiopod Fossils. This two week laboratory sequence involves small groups of students working together to apply statistical techniques to measurements made on a collection of fossils to determine evolutionary or geographic trends which may be evident. The students have available approximately 360 specimens of fossil brachiopods which represent approximately 30 collecting sites. The sites are widely distributed geographically and represent either of two successive geological periods. All fossils are of the same genus, *Atrypa*, but represent at least 10 recognized species. Students select five specimens from each of six sites, for a total of 30 specimens. Measurements of 12 variables are performed on each specimen. These variables represent such properties as the lengths of the brachial and pedicle valves, the angle of the hinge face, number of costae per unit area, sulcus depth and width, etc.

The large data matrix that results from these measurements is entered into a computer via the PC:SOLVE software and is analyzed statistically with SPSS/PC+. Both bivariate and multivariate statistical techniques are used. Students then interpret the results relative to the problem (either classification, geographic trends, or evolutionary trends) they were attempting to solve and the sampling strategy they employed.

Students enrolled in the course seldom have experienced the problems of attempting to quantify objects which are irregular in shape. They also have little experience attempting to manage data which may contain redundancies, and data arrays which are as large as 360 elements. In this laboratory exercise they employ statistical methods, including the multivariate techniques of factor analysis and cluster analysis, to simplify the data set. Little prior knowledge is assumed beyond a few basic statistical measures: central tendency, variability, and bivariate relationships. The programming to execute the routines is transparent to the students. The principles of multivariate analysis are taught to them by the example of performing a similar number of measurements on a group of 30 anonymous students, 15 men and 15 women, from a previous class and analyzing the data using the same programs as those employed in the fossil study.

The educational context of the fossil laboratory relates to the lecture material in The Changing World portion of the course. It also has explicit connections to another Core course, *Quantitative Problem Solving*, which precedes this course. Whereas

Quantitative Problem Solving covers the introduction to statistical principles, and this information is essential for the fossil laboratory, its coverage of the structured approach to problem solving is just as important. A part of the uniqueness of this laboratory is its requirement that the students pose their own problem, devise their sampling strategy to solve the problem, and evaluate their results in light of the way their investigation was structured. For the coming year, greater emphasis will be placed on the pre-data collection portion of the experiment. In this portion the students define their problem and devise a sampling strategy which has the potential to yield a successful solution.

Visual Communication

Turn on a television set or simply look though a typical week's listings and you more than likely will find at least one science documentary. National Geographic specials, NOVA programs, Walt Disney nature programs and episodes of Wild Kingdom all are popular staples of "videoland." We have all seen and marvelled at them. In contemplating how we might connect with a previous Core course, *Communications*, we discussed ways in which we could merge the more traditional processes of research and writing with modern technological advances in communications. As a result, students are asked to produce a short instructional video on a topic from the world of nature/science. Working as a team, they compose a script, observe and record phenomena in nature, and edit the scenes into a 6-12 minute video.

For this project the students work in teams of three to four individuals. Before shooting, we recommend that they discuss with us potential topics for their video. Also, defining their topic and performing library research are essential in order to determine what it is that needs to be filmed. Some of the students have already used a video camera before; for most this is a new experience. We have purchased four Panasonic VHS video cameras, tripods, special lenses, and parabolic microphones for the exclusive use of the students in this course. In addition, a bright field light microscope outfitted with a video camera is also available. Instructions on how to use the cameras are given during the first laboratory session and students immediately get an opportunity to try out what they have learned. To aid the process, we produced a short video entitled "Camcorder Basics," which instructs the students about the use of the equipment. This video, which uses only equipment and techniques which are available to the students, is shown to the class during the first laboratory and is kept on reserve in the library for reference. One key to filming which we stress is the taking of a lot of footage. Most of what is recorded will be edited out later.

The students need to use their research efforts in the library to guide them in obtaining video footage and in writing a script; the writing of the script and shooting of the scenes are usually simultaneous activities that influence each other. During this process, students continuously need to reevaluate just what it is that they wish to convey to the observer.

While some of the students have used a video camera before, we find that very few of them have done any videotape editing. This process begins with the students previewing their raw footage to see what they have been able to record on tape. An advantage to using videotape is that the scenes need not be shot in any particular order—the process of editing easily takes care of that. Instruction and assistance by

media center personnel on using the video editors are provided and the students have sufficient time near the end of the semester to edit their tapes. The editing process also provides the capability of using background music, recording a "voice over," and using titles, captions and some special effects, to enhance the final product.

Students are given grades based on several aspects of the project. We require each group to turn in a 1-2 page "thesis statement" of their project at mid-semester. This consists of a tentative title, a description of the project, including what they wish to accomplish, and a list of references which they will be using in their research. The purpose of this thesis statement is to get the students working on their projects early. This assignment counts for 10% of the final project grade.

In order that we can all share in each other's efforts, we make arrangements to show all of the videos during the final week of class. The following must be turned in at that time: 1) the completed 6-12 minute video; 2) a completed script in which both the actual narrative and summaries of the various scenes are included; and 3) their raw footage with a time log of all scenes. The time log is essential for editing efficiency near the end of the semester. All three instructors evaluate each team's final edited video and script according to the following criteria: 1) scientific content and accuracy of the video and script; 2) video presentation quality, including clarity, appearance and continuity; and 3) technical and artistic effort and merit, including originality and creativity. Each of these are weighed equally and collectively constitute the remaining 90% of the project grade.

This project requires the collaborative efforts of all team members, and thus the team as a whole receives one grade. We trust that all team members will work equally hard and cooperate with their fellow team members. Recognizing that this does not always occur, we recommend and encourage team members to discuss problems involving the lack of cooperation and effort in private with one of us at any time.

The *Revolutions in Science* video project represents one of the best and most unique efforts within both this course and the Core Curriculum as a whole. Students consistently rate this project high on their course evaluations at the close of the semester. As instructors we have seen the quality of the projects dramatically improve over the years, not only because of technological improvements which we have made, but also because of our increased emphasis on the research and writing efforts which need to go into any successful video project. By stressing the communicative nature of this video project and linking it to scientific content, we have successfully achieved our purpose of more fully integrating these two aspects of the curriculum.

Conclusions

Revolutions in Science has achieved an integration of content material between the sciences by using the team teaching approach. It also has achieved an integration with previous Core Curriculum courses by 1) taking an historical perspective, 2) emphasizing problem-solving strategies and quantitative methods, and 3) involving communications via contemporary technology.

One purpose of the Moravian College Core Curriculum is to provide connections between disciplines in order to foster greater interdisciplinary thinking between students and faculty alike. Coming in the middle of a student's Core experience, *Revolutions in Science* provides us with an opportunity to foster such linkages. We feel an

obligation to not only develop an understanding of contemporary scientific ideas and principles, but to have students understand the evolution of these ideas relative to their contemporary social context. Further, we feel impelled to have students make connections and utilize the skills which they have acquired in previous courses. Too often science is taught in a vacuum, unconnected from other disciplines. It is thus seen by students, whether or not they major in science, as something disconnected from their lives, to be performed only by trained specialists who are uninfluenced by their culture. *Revolutions in Science* is our attempt at improving upon this situation.

Biographical Note

Professors Kuserk, Gerencher, and Martin have been involved in teaching *Revolutions in Science* since its inception in 1991. Dr. Kuserk is a biologist who also treaches courses in ecology, animal behavior, microbiology, and environmental science. Dr. Gerencher is a Professor of Earth Sciences who teaches geology, astronomy, meteorology and science education. In addition to teaching an introductory course in general chemistry, Dr. Martin teaches an advanced course in inorganic chemistry.

Changing the College Learning Environment Through Extradepartmental First Year Seminars

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Arthur Levine of Harvard's Graduate School of Education compares changing the curriculum to "moving the graveyard," a metaphor that bespeaks a realistic pessimism both with regard to the "dead" nature of higher learning and the futility of most curriculum reform. At Merrimack College, we have undertaken the daunting task of bringing higher learning back to life through fundamental changes in our approach to general education in the liberal arts. Spearheading this effort is our First Year Seminar, required of all new students at the college. This paper addresses the philosophical, organizational, faculty development, and assessment aspects of implementing the new program.

Pedagogical Philosophy

Discussion of general education reform often centers solely on curricular issues concerning what courses should be taught and the content of those courses. Our efforts have been directed more at reform of pedagogy, to bring students' learning to life once again. A century ago, the philosophers William James and John Dewey explored the psychology of education to determine how students learn best. James and Dewey found that active involvement by students is essential to learning. One way to involve students actively is for them to relate what they are learning to what they already know. James advised that effective learning is best achieved by " . . . the one who thinks over his [sic] experiences most, and weaves them into systematic relations with each other" (433). In his 1899 *Lectures in the Philosophy of Education*, Dewey stated, " . . . it is still a psychological fact that information cannot facilitate growth except as it enters into some direct and living relationship to what the [student] already has . . . " (57), and some years later in *Democracy and Education* added that students " . . . have to do something if they wish to find out something" (275).

The age-old lessons taught by James and Dewey have been largely ignored in higher education. Ernest Boyer, writing on the undergraduate experience in the United States some hundred years later, reports:

> Today the lecture method is preferred by most professors. With few exceptions, when we visited classes, the teacher stood in front of rows of chairs and talked most of the forty-five or fifty minutes. Information was presented that often students passively received. There was little possibility for positions to be clarified or ideas challenged. (149-50)

Although the graveyard may have been moved since the turn of the century, its contents are, in many cases, still dead! To bring learning to life again, Merrimack's First Year Seminars are designed to promote active involvement in learning among students and to acclimate faculty to methods of teaching that foster active learning. The

seminars foster "inquiry and conversation on civilization," exploring topics that transcend departmental boundaries and promote student involvement at many levels, including course planning by students, speaking and writing, asking questions and seeking answers through use of primary sources, critical thinking, problem solving, working collaboratively, and presenting reports–all the while connecting new knowledge to the students' own experience through a focus on broad issues of civilization in all its conflict and diversity. The key pedagogical elements of the First Year Seminars are listed in Table 1.

Table 1: Key Pedagogical Elements of First Year Seminars

- Active involvement by students throughout their education.
- Development of learning skills to foster growth throughout the lifespan.
- Making connections within curriculum and to students' lives.
- Development of a learning community in which students have influence.
- Encouraging international/multicultural experience.

At Merrimack, we see these elements as essential to a general education in the liberal arts, especially one designed to prepare students for a future where knowledge is expanding rapidly while the distances among peoples are shrinking.

Organizational Considerations

The organizational process that led to the establishment of the new seminars is an important one to address. Moving a graveyard is a daunting enough task by itself, but bringing it back to life borders on the miraculous. Colleges have a unique form of organization that can be highly resistant to change. At Merrimack, there were several factors that worked together to make the implementation of the seminars a relatively easy task. There was strong leadership from the Provost and Vice President for Academic Affairs (VPAA), which was essential to the success of the effort. Furthermore, the college was in the process of examining its academic mission through a strategic planning process that established an Academic Planning Committee. The committee developed the concept of the seminars based on the work of Astin (1985, 1993) and major curriculum reports published by the Association of American Colleges and the U.S. Department of Education (Project on Redefining the Meaning and Purpose of Baccalaureate Degrees, 1985; Study Group on the Conditions of Excellence in American Higher Education, 1984; Task Group on General Education, 1988). Approval of the new program by the Faculty Senate and ultimately the Board of Trustees grew out of this process.

Because Merrimack had always been a comprehensive college, the strategic plan was based on the concept of making the most of its liberal arts and professional programs by beginning to link the liberal arts and the professions in interdisciplinary ways. It is noteworthy that the First Year Seminar is the first program at the college where faculty from the liberal arts and the professions work in close collaboration, as

do students from the faculties of Liberal Arts, Business Administration and Science & Engineering. The program itself is extradepartmental, in the sense that the faculty offering seminars are teaching outside of their departments and are not constrained by the limits of their particular discipline. The Provost and VPAA oversees the program and its funding. The program is operated out of the Office of the Dean of Studies, who acts as the chairperson. An elected committee helps the Dean of Studies select the seminars that will be offered each semester. The Dean of the Faculty of Liberal Arts administers the faculty development and assessment aspects of the program.

The strategic planning process assured that the necessary environment for the new program was created by approving the redesign of two campus buildings to provide the appropriate seminar rooms, as well as spaces within the buildings for students and faculty to relax outside of class and continue the "conversation" begun in the seminars. The new seminars have been integrated into the existing curriculum as an institutional requirement for all students at the college, and new admissions publications have been designed to promote the college through its new seminars and the pedagogy of "inquiry and conversation on civilization." These publications describe Merrimack as a college where "active learning is our rule of thumb."

The chronology of events leading to the establishment of the seminars illustrates how quickly these changes came about. In spring, 1991, the Provost first suggested a new curriculum based on a "conversation on civilization." During the following academic year, 1991-92, the Academic Planning Committee, a part of the strategic planning process, developed the seminar proposal under the chairmanship of the Provost. Members of the committee conferred with all academic departments of the college about the proposal, creating support for a pilot program. The next summer (1992), faculty were invited to submit proposals for seminars to be offered as part of the pilot program, which was slated to take place in spring, 1993. Five proposals were approved, with released time for faculty to prepare their seminars. In the spring of 1993, the five pilot seminars were offered to first year students and assessed at the same time. That spring, based on the assessment of the pilots, the faculty voted to make the seminars a required part of the general education curriculum.

More proposals were immediately solicited from faculty, and the full program was implemented the following fall. The reconfiguration of academic buildings began in the summer of 1993 and will be completed in the summer of 1994. The new admissions publications promoting the program were developed in 1993. The First Year Seminar is a first step toward the development of a new learning environment on campus, to be followed by other efforts to promote active learning. The college anticipates further developments, both in the curriculum and the co-curriculum, that promote learning by doing, including senior seminars to be in place when this year's first year students are seniors.

Organizationally, we regard a college as an organic institution, that is, one that develops through a growth process just like any other organism (Walsh 1991). This growth occurs through the process of differentiation and integration. First a new part, the First Year Seminar, is created by the process of differentiation and then the new part is integrated into the organism, as the seminars have been. A succession of new parts will be differentiated and then integrated into the whole as the curriculum develops. This approach is distinctly different from approaches designed to change the

whole curriculum at once. At Merrimack, the new curricular direction has been integrated into the existing curriculum, while leading the college in a new direction.

For 1993-94, the college has nineteen seminars in place from which new students select, encompassing a broad range of topics. The range of choice in topic is intended to help students find a seminar to connect with their own particular interests. Faculty offering seminars come from departments throughout the college, including Biology, Chemistry, Civil Engineering, Economics, Education, English, Management, Political Science, Philosophy, Psychology, Religious Studies, and Sociology. The list of seminars is presented in Table 2.

Table 2: First Year Seminar Offerings Approved in 1993-94

Alternative Models of Health and Disease	Love and Death
Boston Transportation: History, Winners and Losers	Native American Spirituality
Civilization, Philosophy and Life	The Politics of Language
Contemporary Legal Problems	Psychological Perspectives on Civilization
Economics Issues and Perspectives	
Environmental Science, Technology and Law	Science and Technology and the Creation of the Modern World
Exile and Redemption	
Social Inequalities	Faith Through Architecture
Tales Out of School: Stories in Education	How Do You Know That? The Nature of Inquiry
Women in Business: Past, Present and Future	
Human Rights	Women and Science

The First Year Seminar Program introduces new students to active learning designed to develop their abilities and skills in areas considered central to academic success at Merrimack College and beyond. Although subject matter varies to serve individual student interest, there are common specifications that a proposed seminar must meet to be approved. Not every seminar meets each specification, but seminars must all embrace the general approach that promotes active student learning. The college explicitly discourages the traditional features of higher education: fixed syllabi, textbooks, lectures, note-taking, exams, and term papers. These stated specifications established for the pedagogy of the First Year Seminars are presented in Table 3. A description of these specifications is distributed to all faculty as part of the process of soliciting proposals for new First Year Seminars each semester.

Table 3: Specifications for Skills and Abilities Developed in First Year Seminars

Formulating and asking questions	Collaboration with peers
Critical and analytical thinking	Decision making
Problem solving	Writing and speaking
Library skills	Making oral and written presentations
Reading primary sources	Making connections in students' learning
Research skills	Developing breadth of perspective on civilization

Ideally, as called for in the implementation plan, each faculty member teaches a First Year Seminar for three years, with a turnover of one-third of those teaching each year. This cycle is designed to permit as many faculty as possible to participate in the program, with the expectation that more and more of these faculty will then go on to utilize the new pedagogy in their other courses. In this way, we anticipate that the college learning environment will gradually change through a process of organic development.

Faculty Development

> While a participatory learning environment cannot transform society by itself, it can offer students a critical education of high quality, an experience of democratic learning, and positive feelings toward intellectual life. That experience may spread through many classrooms if enough teachers undertake it as a project in a single institution. In turn, if participatory approaches become a leading response to student alienation and teacher burnout, the progressive impact of democratic learning may be felt broadly in education,and eventually outside education, by orienting students to democratic transformation of society by their active citizenship. The more widespread the practice of participatory empowerment in classrooms and [throughout] schools, the greater will be the challenge to unilateral authority in and out of educational institutions. As teachers see other teachers and students experimenting, more may be encouraged to test participatory empowerment in their own classrooms, and in the process promote the positive emotions that students need in order to embrace critical and democratic learning as the politics of their education. (Shor 29-30)

These inspiring words are leading to lively new teaching practices now conducted at Merrimack College. There was a time when, at Merrimack, the faculty development program was enacted to support individual scholarly achievement. Teaching was seen as something one ought to have been able to accomplish alone by virtue of one's graduate training. And there was almost no attempt to bridge the disciplines in any formal way. In the 1980s, some movement toward interdisciplinary study emerged at Merrimack with team-taught courses in a Humanities sequence, in Urban Studies, and various other local courses. Still, however, faculty development was almost never used to enhance teaching. Now, at Merrimack, the faculty development program for the new First Year Seminar requirement aims to create an intellectual community focused on common issues and themes from diverse perspectives as a resource for integrating coherence and pluralism throughout the college curriculum.

At Merrimack, the faculty who are selected to teach in the First Year Seminar program are awarded either a summer stipend or a one-course reduction in their teaching load to prepare for teaching their seminars. With this award, these faculty agree to attend summer workshops and, during the academic year, weekly workshops designed to prepare them for enacting their seminars.

Thus far, Merrimack faculty have been participants in workshops and colloquia that have been led by scholars from within the college community as well as from outside the community. Linguists, psychologists, and scholars from across the wide

spectrum of liberal education have worked with seminar faculty. Moreover, events involving students and faculty in discussion and debate have been organized as a way of sustaining an intellectual response about how pluralistic disciplines and perspectives can be joined coherently.

For example, Ira Shor was invited to spend a day at Merrimack helping our seminar faculty to think about the necessity to make the course student-centered. He advised our faculty to backload their expertise and to frontload the students' knowledge about the subject. Shor emphasized using the dialogue–conversation–as a pedagogical tool. And that's what our faculty have been doing–with good results. In fact, many are impressed with the way the classes have come together–as a family, a working teaching and learning community–to help realize the goals of the seminars. They are also impressed with the fact that, when they enter their seminar rooms, their students are conversing intelligently about their courses. The students at Merrimack have become active, where before they were passive.

This faculty development program has continued. Daniel Moshenberg, who runs a First Year Seminar program at George Washington University, visited Merrimack for two days in the summer of 1993. He helped the faculty to consider organizing their courses around language and the goals of a participatory education. Members of Merrimack's English Department led a workshop on the double-entry journal as a way to help engender constructive conversation in the classroom. Tom Angelo led a workshop on classroom assessment techniques. Leone Scanlon, Chair of the New England Writing Centers Association, spoke about freewriting, peer-group response, and the writing process. Madeleine Grumet visited this past February to work with seminar faculty on their courses and to address the entire campus community. She helped us to delineate the advantages and difficulties involved in curriculum reform.

At Merrimack College, the faculty development program for the First Year Seminar program is building an exciting intellectual community. In fact, here are some of the comments from faculty who have participated:

> · . . . I thought the Friday afternoon sessions were marvelous. For the first time in my teaching career I had a chance to sit down with colleagues and talk teaching with them. I even took to calling these sessions my "therapy sessions." (Faculty member from the Department of Religious Studies)
> · The meetings provided a forum to exchange ideas, approaches, and methodologies with other faculty. I also appreciated the forum with Ira Shor and the access to books and resources. . . . (Faculty member from the Department of Biology)
> · The Friday afternoon meetings were very good in hearing good ideas and in developing a sense of community and common purpose that helped sustain the sometimes lonely effort involved in teaching. (Faculty member from the Department of Philosophy)
> · The Friday afternoon meetings were very rewarding and, in fact, something I looked forward to attending. The meetings provided one of the few opportunities I have found at Merrimack to discuss teaching techniques and relate my experiences. (Faculty member from the Department of Civil Engineering)

The idea of a liberal education is alive at Merrimack. We are beginning to enjoy our renaissance. It is becoming a community which, as Dewey wrote in *The Public and Its Problems,* allows the individual learner to experience the "release and fulfillment of personal potentialities which take place only in rich and manifold association with others: the power to be an individualized self making a distinctive contribution and enjoying in its own way the fruits of association" (150).

Yet, as Death told the Knight in Bergman's *Seventh Seal*, there are no guarantees. When a school's faculty commits itself to a new pedagogy, it takes a risk. There are those who will be quick to find fault, who will hasten to diminish the effort. For example, take grading, which is high in our seminar courses; some of our faculty still believe that severe grading measures rigor and thus effective teaching. Why, one of the new seminar faculty said that he felt he was an English teacher because his grades were so high! We take heart here in this aphorism of Jean-Francois Lyotard: "Most people have lost the nostalgia for the lost narrative. It in no way follows that they are reduced to barbarity" (41).

As some of the seminar faculty have identified, there is a great deal that needs to be discussed about, say, how to stimulate critical thinking in students and about how to promote writing in the disciplines. Here's what one person wrote:

> The Friday afternoon sessions only whetted my appetite for discussing teaching with colleagues, but they did not satisfy me. I feel we need to work on this aspect of the seminar program and learn how to talk to one another about teaching. I think the ideal program would have two components: (a) greater mutual exploration of pedagogical issues with colleagues and (b) more detailed guidance in certain areas such as how to teach writing across the curriculum, how to stimulate discussion and critical thinking in students, and generally how to do those things that I found difficult. (Faculty member from the Department of Psychology)

Curriculum change, positive or not, demands constant reflection and assessment. At Merrimack, therefore, we consider carefully the responses from all participants in the First Year Seminar program. Yet, we are also mindful of Dewey's caveat in *Experience and Nature*:

> No one discovers a new world without forsaking an old one; and no one discovers a new world who exacts guarantee in advance for what it shall be, or who puts the act of discovery under bonds with respect to what the new world shall do to him when it comes into vision. (201)

Assessment Efforts

Built into the First Year Seminars–an outcome really of the faculty development program–is an ongoing assessment effort. Interestingly, it should be noted here that a proposal was made to the Provost to provide released time for a faculty development project on the assessment of teaching in the First Year Seminar program. One of the members of our assessment team wanted to pursue this topic, and the Provost viewed the proposal favorably. As a result, this person was given released time this spring to

further the assessment effort of the First Year *Seminars and to enhance her own* pedagogical and professional achievements.

To assess the pilot program, we used three distinct data sources: midterm focus groups, which prompted narrative responses from the students; end-of-the semester evaluation forms, which provided us with quantitative and qualitative student response; and professors' summary statements. The aim was guided by the particular goal of determining how an active learning program could be made as effective as possible at Merrimack College. Although we are currently employing more of the classroom assessment techniques of Angelo and Cross (1993)–one-minute paper, teacher inventory goals, one-word summary–we are assessing in a similar way this year.

What we have found so far is summarized in Tables 4, 5 and 6. Table 4, for example, presents students' assessments of the seminars at midterm.

Table 4: Students' Comments at Midterm

- Teacher is viewed as a facilitator, rather than as a guardian of "T"ruth.
- Students affirmed that they had significantly more input into seminar class policy.
- The level of participation, discussion, and writing far exceeded that in other courses.
- The subject matter of the seminar was discussed outside of class.
- The student-centered class lent students a measure of authority in their learning.
- Research and investigative techniques were seen as not clearly explained and integrated.

Table 5 summarizes, quantitatively, the students' overall impressions of the seminars. The computation is a summary of responses made on a standard scale where 4 is best and 0 is worst.

Table 5: End-of-Semester Quantitative Evaluations

- Oral presentations (2.8)
- Converse easily in class (3.3)
- Write better (2.8)
- Read sources other than texts (2.9)
- Think analytically (2.8)
- Formulate critical questions (2.8)
- Appreciate different perspectives on an issue (3.0)
- Inquiry and research (2.6)
- Familiarity with library resources (2.0)
- The instructor's role (3.1)
- Overall reactions (3.0)

Table 6: End-of-Semester Qualitative Comments

Appreciated being invited into discussion.
· Liked hearing other views.
· Felt empowered by helping to make policy decisions.
· Wanted more explanation of research strategies.

It was important and encouraging to note the students' favorable impressions of the seminar courses. It was just as important to find out the assessments of the courses by the faculty who were teaching them. We learned that, despite frustrations with some aspects of the course, the faculty viewed the seminar as an important developmental experience for both students and faculty. All felt enthusiastic about their courses, which undoubtedly translated into intellectually stimulating classes for their students (as evidenced above by the rather positive quantitative and qualitative student evaluations). We were encouraged by the desire to excel in teaching expressed by all of the faculty, as well as by their willingness to take risks with strategies that promote active learning. Noticeable also was the degree of their professionalism. Faculty were constantly assessing their own performances for ways to improve the seminars, with the expectation that their efforts would ultimately lead to a better college-wide program.

One of the conclusions of those involved in assessing the program is that steps should be taken to ensure that the First Year Seminar is not an isolated experience for Merrimack's students. We want the college's Academic Planning Committee to ensure that a range of initiatives will reinforce the objectives of the First Year Seminar program college-wide and at all levels of the undergraduate curriculum. We believe that this will lead to pedagogical and curricular change–and ultimately clarify our vision of the new world we have discovered for ourselves at Merrimack.

Mike Rose, in *Lives on the Boundary*, apprised educators of the following:

> We are in the middle of an extraordinary social experiment: the attempt to provide education for all members of a vast pluralistic democracy. To have any prayer of success, we'll need many conceptual blessings: A philosophy of language and literacy that affirms the diverse sources of linguistic competence and deepens our understanding of the ways class and culture blind us to the richness of those sources. A perspective on failure that lays open the logic of error. An orientation toward the interaction of poverty and ability that undercuts simple polarities, that enables us to see simultaneously the constraints poverty places on the play of the mind and the actual mind at play within those constraints. We'll need a pedagogy that encourages us to step back and consider the threat of the standard classroom and that shows us, having stepped back, how to step forward to invite a student across the boundaries of that powerful room. Finally, we'll need a revised store of images of educational excellence, ones closer to egalitarian ideals–ones that embody the reward and turmoil of education in a democracy, that celebrates the plu-

> ral, messy human reality of it. At heart, we'll need a guiding set of principles that do not encourage us to retreat from, but to move closer to, an understanding of the rich mix of speech and ritual and story that is America. (238)

As a result of our pedagogical philosophy, organizational considerations, faculty development program, and assessment efforts, we think that the First Year Seminar program we have developed at Merrimack College may well be a site for Rose's experiment. At the very least, we no longer think of graveyards when we talk about the curriculum. More often than not, these days we think about growing gardens!

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Evaluating Two Liberal Arts Curricula: An Initial Assessment of Comparative Performance

Peter von Allmen, Dana S. Dunn, and William C. Deeds
Moravian College

Moravian College, a private, selective liberal arts college in eastern Pennsylvania, currently maintains two undergraduate curricula. The pre-existing curriculum, a traditional set of liberal education guidelines courses (LEG), has been in operation since 1967. Beginning in 1990, students also had the option of selecting an integrated interdisciplinary program known as the core curriculum (CORE). Students choose their course of study prior to matriculation and typically do not move from one curriculum to the other. Although the goal of each curriculum is to provide a general education and prepare students for advanced undergraduate study in their major field, the "approach" in each differs significantly. The goal of this paper is to compare and evaluate the students and their academic performance in the LEG and CORE, both *a priori* and *ex post*.

The two curricula at Moravian College reflect higher education's recent history. The LEG represents general education in a broad but self-selected fashion, while the CORE champions the value of general education through the explicit development of interdisciplinary connections. Arguably, both of our curricula possess respective virtues and can be deemed successful if they create a happy medium between individualism and the development of community (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985; Weingartner, 1992). Yet, from an evaluative and--given higher education's budgetary constraints--pragmatic perspective, it is important to compare student performance and to assess the efficacy of each curriculum toward creating liberally educated adults.

We will present preliminary research addressing these questions. Before doing so, however, we will first provide more detailed descriptions of the two curricula.

Two Liberal Arts Curricula

As a central part of the LEG, Moravian College is strongly committed to the development of analytical and writing skills. This commitment, reflected in the course offerings, is meant to ground the student in traditional areas of study in the liberal arts and sciences. A total of eleven courses in basic studies (writing, foreign language [2 units], quantitative analysis), humanities (literature, fine arts, religion and philosophy), social sciences (Western history, world cultures, and social and behavioral science) and natural science. Students also complete eight half-unit courses in physical education. Students are encouraged to complete the guideline courses early in their college experience (typically early in their junior year). Courses taken for fulfillment of guideline requirements can generally be counted for credit toward a student's major (e.g., an introductory course in psychology can fill the social and behavioral science guideline for a psychology major). All LEG courses are taught by individual faculty members.

In contrast, the CORE consists of seven integrated courses distributed across the

first two years of college. These courses, too, are designed to be a coherent introduction to the liberal arts and sciences, as well as a shared body of knowledge on which to base study within individual college majors. However, knowledge is explored outside the confines of traditional subject divisions. The sequence of seven courses emphasizes developing competencies in basic skills, such as writing, listening, speaking, and problem solving. Students are also required to complete two semesters of a foreign language and eight half-unit physical education courses. Each CORE course is taught by an interdepartmental team of faculty, allowing the curriculum to draw on expertise from various disciplines. Specific content of each CORE course is at the discretion of team members and may vary from semester to semester as team members so choose.

Because the seven CORE courses are novel, a brief description of each is warranted. From the perspective of Western culture, Macrocosm/Microcosm I and II examine the needs of the community (the macrocosm) and the freedom of the individual (the microcosm). Communication is an introduction to the expository writing process and the development of speaking and listening skills. Macrocosm/Microcosm I and Communication are directly linked in that writing assignments in the latter course are based on material from the former. Grades are determined by joint consultation of the team members of both courses (see Wingard, Dunn, & Brown, 1993). Quantitative Problem Solving focuses on teaching those skills needed to collect and analyze data, interpret results, make decisions, and to promote logical thinking. The changing paradigms of science with examples from physics, astronomy, chemistry, geology, and biology are reviewed in Revolutions in Science. The increasingly interdependent nature of the social, political, geographic, and economic aspects of the world is explored in Global Issues. The final class, the Core Seminar, synthesizes concepts and information acquired in the preceding CORE courses. Recently, CORE students have studied the complex and often paradoxical aspects of American character.

Faculty participation in the CORE is voluntary. Each course is taught by a team of three faculty, usually from three separate departments. The exception is the Communications course, which is taught by four faculty members, only two of whom are from the English Department. In any given academic year, then, a maximum of twenty-two faculty (from a total of 85 full time) are involved in teaching in the CORE. The actual number is typically slightly less than this maximum because some faculty teach in more than one CORE course. Once part of a team, faculty have historically remained associated with a given course for at least two iterations. This level of participation is, at least in part, due to the large time commitment associated with organizing a team taught course.

Although many faculty elect to not teach in the CORE program, most faculty do teach courses that make up the LEG curriculum. In many departments, those courses that satisfy LEG requirements tend to be lower or entry level courses. It should be noted that LEG courses are regularly offered catalogue courses that students may use to satisfy LEG, departmental major or minor requirements, or simply taken as free electives. With the exception of non-major science courses, no courses are set aside specifically as LEG only.

In the next section, we turn to specific hypotheses that relate to the efficacy of the

CORE and LEG as educational curricula.

Hypotheses

When assessing academic performance across curricula, there are a variety of measurable dimensions. We identify three of these dimensions which we view to be particularly important and readily observable. These dimensions are academic performance, attrition, and choice of major. In addition, we consider differences between the two curricula which are more subjective in nature.

In terms of assessment, the most straight forward of these is academic performance, which is operationalized as grade point average (GPA). For this test, one might only consider performance within a required set of core or distribution courses. Alternatively, one might also assume that the effects of a curriculum are more global with respect to performance; that is, participation in a curriculum influences performance in elective and non-elective courses. We have elected to test the latter approach in this paper.

Subsequently, we test for significant differences in attrition rates between the two curricula. If, for example, one curriculum was perceived to be more demanding or provided less direction for further study, then its attrition rate should be higher.

Less directly related to student performance, we also evaluate differences in choice of student major(s). Exposure to one curriculum or another may influence the choices along this dimension. Finally, if the CORE curriculum is successful in stimulating more broad based thinking, we might expect to see a greater incidence of double majors.

In terms of subjective differences, we were interested to determine whether participation in the CORE had effects that were, although less directly measurable, important for the educational development of the students. For example, we wondered if CORE students become more active learners in the classroom compared to LEG students.

Data employed were the relevant academic variables--both a priori and ex post--through end of the junior year for the class of 1994 at Moravian College. At matriculation for the fall 1990 semester, 77 students (41 males, 36 females) chose the CORE while 179 students (93 males, 86 females) enrolled in the LEG.

Results

In order to assess whether students differed from one another prior to matriculation into one of Moravian College's two available curriculums, we conducted a series of two-way analyses of variance (ANOVAs) using curriculum choice (CORE versus LEG) and gender (male versus female) as the blocking variables.

A Priori Differences

Scholastic Aptitude Test (SAT) scores were obtained for students enrolling in the two curricula. We analyzed the SAT verbal and mathematical sub-scores separately. CORE students had a higher average verbal score ($M = 485.87$) than LEG students ($M = 467.09$), $F(1, 255) = 3.89$, $p < .05$. Female students also had marginally higher verbal score ($M = 481.46$) than did males ($M = 464.78$), $F(1, 255) = 3.63$, $p < .06$.

The Curriculum x Gender interaction did not reach significance.

In the analysis of the SAT mathematical sub-score, neither the curriculum or the gender main effect reached significance. However, the interaction between curriculum and gender was marginally significant, $F(1, 255) = 3.06$, $p < .09$. Female CORE students tended to have a higher average SAT math score ($M = 550$) than male CORE students ($M = 534.39$), while male LEG students had a higher math score ($M = 537.89$) than their female counterparts ($M = 514.60$).

High school class rank, a variable which has been found to be meaningfully predictive of academic performance at Moravian College (von Allmen, Johnson, & Haines, 1993), was also subjected to a two-way ANOVA (please note that lower numbers in this analysis indicate a higher rank). There was a main effect for gender, such that accepted female students had a higher average class rank ($M = 24.78$) than males ($M = 34.47$), $F(1, 227) = 13.5$, $p < .0001$. Curriculum choice was not influenced by class rank nor was there any interaction between curriculum and gender ($Fs < 1.0$).

Moravian College also requires that student applicants complete the Test of Standard Written English (TSWE). Female students had a higher average score on the TSWE ($M = 499.59$) than did males ($M = 464.59$), $F(1, 251) = 13.67$, $p < .0001$. Again, however, curriculum choice was not linked to performance on the TSWE, nor was any interaction between the blocking variables present.

A comprehensive study of *a priori* differences between matriculated students in the CORE and LEG curricula was undertaken in Fall 1990 (Rubenstein, 1991). Beyond the standardized test score differences noted previously, a series of chi-square analyses were conducted on student responses to a detailed survey regarding high school activities and family background. While some differences were found, Rubenstein concluded that CORE and LEG students represent a single population.

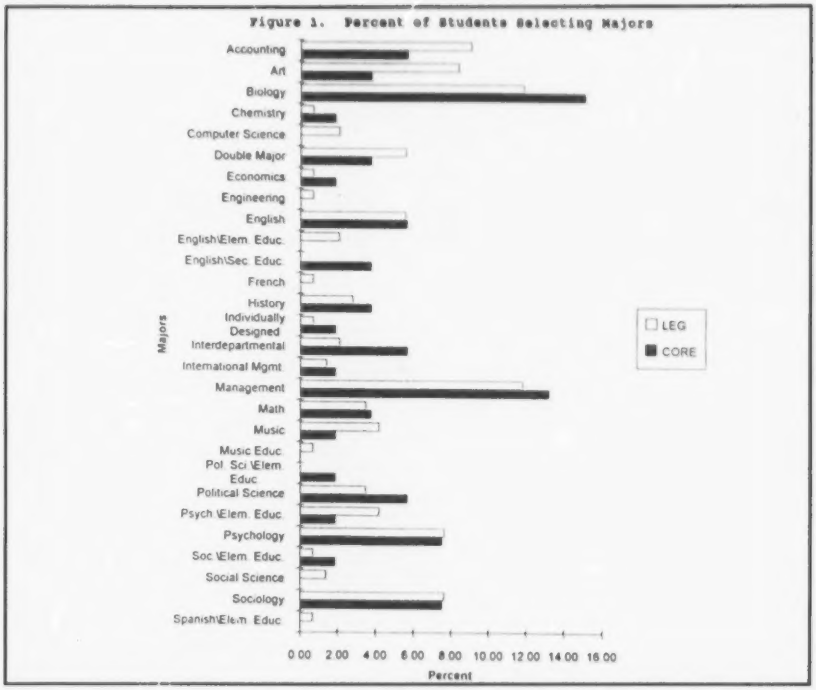
Due to the general lack of reliable *a priori* differences in these data, it can be concluded that CORE and LEG students are drawn from the same population.

Ex Post Differences

Similar to the *a priori* variables, *ex post* variables were analyzed using two-way (Curriculum x Gender) ANOVAs. Please note that student attrition across time (2 years) necessarily reduces the degrees of freedom reported in the following analyses.

Academic performance. As a baseline measure of performance, we analyzed the grade point averages (GPAs) of the freshmen at the end of the fall 1990 term. There was no main effect due to curriculum type; indeed, both groups had an average GPA of 2.57. However, there was a pronounced gender effect: Female freshmen had significantly higher GPAs at the end of their first semester in college ($M = 2.77$) than did the males ($M = 2.39$), $F(1, 254) = 17.92$, $p < .0001$. The interaction did not reach significance ($F < 1.0$).

As a long-term measure of academic performance, we examined student GPAs after the first two years of college--the time when CORE students were finished with the seven course sequence and the LEG students have completed the majority of their guideline requirements. Only one significant effect was found in the analysis of student cumulative GPA at the conclusion of the spring 1993 term: After two years in college, female students continued to have a significantly higher GPA ($M = 2.94$) than did their male counterparts ($M = 2.72$), $F(1, 196) = 8.52$, $p < .004$. Neither the main



effect for curriculum nor the interaction between curriculum and gender reached significance (both Fs < 1).

Because it is possible that innate intellectual ability may be masking any differences due to the effects of the two different curriculums, we utilized an analysis of covariance (ANCOVA). We repeated the above analyses on cumulative GPA, controlling for high school class rank in the first analysis and total score on the Scholastic Aptitude Test in the second. The gender effect was not changed by either ANCOVA, and neither main effect for curriculum or the Curriculum x Gender interactions reached significance.

Total units completed by the end of the sophomore year were also subjected to a two-way ANOVA. It is possible that total units is a more sensitive measure of academic performance because students' GPAs do not reflect classes dropped in which they are typically doing poorly. There were no effects due to curriculum, gender, or an interaction between these variables.

Attrition. In order to compare attrition levels between the two populations of students, a z-test was conducted on the proportion of students still enrolled at the college in the CORE (71.43%) and LEG (80.11%) curricula at the end of the junior year. The test resulted in a z-score of -1.53, which is not significant at conventional levels.

Choice of majors. Students can at any time declare a major in one or, at most, two fields of study. Using records from the Registrar's office, we examined patterns of major selection. The relative distributions of majors are shown in Figure 1. As can be

seen in this figure, the distributions are quite similar. For each, the most frequently chosen majors are management, accounting, biology, English, psychology, art, and sociology. Accounting and art are disproportionately represented by LEG students. This difference could be due to the perception that art and accounting are viewed as time intensive (on a per course basis), thereby motivating students to avoid participating in a novel interdisciplinary program such as the CORE. Interdepartmental and individually designed majors, however, are dominated by CORE students. This distribution may be a result of the interdisciplinary nature of the CORE. It is also interesting to note that the science majors--biology and chemistry--are also more heavily subscribed by CORE students.

Finally, as Figure 1 shows, there does not appear to be a pronounced difference in incidence of double majors across curricula.

Subjective observations. It occurred to us that some of the most important changes we might see in students (e.g., intellectual maturity, classroom poise) are not the type that are easily quantifiable. Comments from both CORE faculty and faculty who have taught CORE students in other classes point to some encouraging trends. In some ways, CORE students can be said to have created an educational community, one where active participation in classroom affairs is quite common (Smolansky, Dunn, & Somers, 1993). This community may have developed not only due to the nature of the classes themselves--where interactive learning and open debate are emphasized--but also because the CORE promotes familiarity among its students (and also its professors). One faculty member who does not teach in the CORE noted that CORE students appear more willing to participate individually in class, are adept at group projects, and are better able to help other students with course material than LEG students.

CORE students appear to develop better skills than LEG students when it comes to initiating and completing writing assignments. Each CORE course has a significant writing component, thus students become quite adept at topic development, outlining, pre-writing, writing, and editing their papers. We believe this characteristic is particularly meaningful because discussions with colleagues at our own and other institutions reveal the difficulty recent cohorts of students seem to have with written work. CORE students are comfortable with writing, we think, not merely as a result of regularity with which they do it but also because they learn to write in an interdisciplinary fashion (Wingard, Dunn, & Brown, 1993).

Conclusions

The purpose of this paper was to investigate outcomes of student participation in two different curricula. We view this evaluative effort as the first step in the determination of the efficacy of interdisciplinary teaching programs such as the CORE. As the CORE program is relatively new (in fact, data used were from the first class of students that could select the CORE), we plan to conduct additional studies in the future.

The available data indicate that there are relatively few *a priori* differences among our students. The most notable *ex post* differences are those in choice of major and in classroom participation. If the relative lack of CORE students among accounting and

art majors is simply a reflection of student apprehension regarding a new program, these differences should fade over time. If the differences are instead due to characteristics of the students attracted to these majors, such differences are more likely to persist over time and will need to be addressed if a single curriculum is adopted. The increased number of interdepartmental and individually designed majors is encouraging, as the CORE is designed to promote interdisciplinary, independent, critical thinking. Our data indicate that, at least among some students, the program is succeeding.

Differences in student behaviors that are less easily measured are perhaps the most interesting ones, and we pledge to explore them further. Again, if the CORE curriculum is succeeding, this accomplishment should be visible in the students' approach to learning, so that learning becomes an active process rather than a passive chore. Our impression is that the CORE is indeed promoting such active learning. It is our belief that interdisciplinary programs such as the CORE have a promising future in creating connections for students among disciplines which traditionally have been treated as separate.

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Author Notes

Preparation of this article was partially funded by the Moravian College Faculty Development and Research Committee and the Curriculum Implementation Committee. The core curriculum described here was partially funded by grants from the Charles A. Dana Foundation and the National Endowment for the Humanities. Bettie Smolansky provided invaluable help manipulating data files for preparation of this article.

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TEACHING LITERATURE AND MEDICINE: UNEQUAL MARRIAGE?

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If an interdiscipline is shaped by its origins, then the recent academic union of literature and medicine resembles a traditional 19th Century marriage rather than a 20th Century innovation. Their "courtship" can be expressed in a fable: Once upon a time in the mid 1970's, Literature, the daughter of an old, respectable but impoverished family, met Medicine, the son of an equally venerable and nouveau riche clan whose image had been tarnished from being dragged through the courts of law. They had known each other as children, but then went away to different schools and grew apart. Now she needed his fortune; he needed her good name. So Literature married Medicine and a new interdisciplinary couple came about. Although they said they loved one another, their backgrounds were different, and theirs was a marriage of convenience, economic at the core.

Medicine and art have always shared deep-rooted historical connections in shamanistic cures, the chants of the ancient Greek physician undoing his elaborate bandages, and the medical translation of the human body as imago. By the 1970's, however, Western medicine, still masculinist both in demography and its reliance on technology for social credence, had disengaged itself from the arts only to find that it no longer enjoyed popular approval. Doctors were frequently being sued for malpractice and negligence; clients were demanding accountability and greater sensitivity in return for the increasingly high costs of the doctor's services. Feminists and other women called for widespread changes in the management of childbirth and gynecology. Everyone, it seems, had discovered that the doctor was not God. During the same time, literary studies suffered genteel poverty after the crash of the academic market at the beginning of the same decade. Scholars with Ph.d.'s in poetry found themselves driving taxis, or gratefully accepting insecure hard labor composition jobs at hardscrabble salaries. They probably dreamed of "med school" after all. If not made in heaven, then, the academic "marriage" between the doctor and the poet was brokered through the realpolitik of making a living. My position in this essay is that the cultural gendering of the two disciplines and the conditions under which they were formally joined as an interdiscipline have distorted their real value to one another and complicated the pedagogy in this emerging field.

The "interdiscipline" itself often bears resemblance to heterosexual "intercourse," with science and art as the gendered partners in the transaction. Typically, a field of study culturally male-dominated or perceived as "masculine"---biology, law, business---is yoked to a second field, culturally identified as "feminine," usually one of the arts. The result is "Literature and Law" or "Representations of the Physician in Film," and so on. Some established disciplines---history, for instance, and philosophy---are in effect "honorary males," that is, seen as concerned with "facts" (usually of war and politics) or abstract thinking. For this reason, in part, courses like "The History of Medicine" and "Medical Ethics" attract more pre-medical students than medicine and the arts because history, for instance, is thought to have greater evidentiary

"hardness" than poetry, which is supposed "soft." "Medical Ethics," in particular, seems to promise pragmatic and cautionary advice on how to avoid lawsuits; and it implies that one can pick up ethics in fourteen weeks or less and then have done with it: paid dues. The arts, contrastively, are seen as easy, inconsequential, accessible to anyone, and decorative. The Dean of a medical school once encouraged me to offer Literature and Medicine because, he said, his students might enjoy "an elective" and needed a "break" from their "real work." While "Art for Doctors" might find a marginal place with such a person, it would be unthinkable to suggest "Hematology for Poets." In their academic genesis, then, dowerless Literature, bringing nothing but her good name, tends to become the handmaiden of Medicine in return for her peripheral place at his overflowing table. The relationship between these disciplines, first cast as a nineteenth century marriage, has evolved accordingly, with literature," the angel in the house," responsible for the cultural entertainment and spiritual upkeep of the couple. "She," we are told, exists to delight and humanize "him."

In this essay I hope to suggest wider roles for literature and medicine in the context of undergraduate education. I will ask why teach literature and medicine and how can literature and medicine successfully harmonize in the classroom and truly interdepend. Interestingly, many doctors themselves seem not to be troubled by these questions. A number of them---Anton Chekhov, William Carlos Williams, Richard Selzer, Walker Percy, Lewis Thomas and Perri Klass, to name just a few---have written or are writing abundantly and well both within and outside medical contexts. The surgeon Richard Selzer, our contemporary, has no doubt about the importance of literary art as he sets it forth in Mortal Lessons: Notes on the Art of Surgery:

> No, it is not the surgeon who is God's darling. He is the victim of vanity. It is the poet who heals with his words, stanches the flow of blood, stills the rattling breath, applies poultice to the scalded flesh. Did you ask me why a surgeon writes? I think it is because I wish to be a doctor. (Selzer, 23)

Selzer announces what has become the formal recognition of a deep, if murkily defined, relationship between the arts and sciences. With the expanded reissue of Joanne Trautmann's extensive Literature and Medicine: An Annotated Bibliography, an important sourcebook in the field, the varieties of medical/literary experience are now accessible to all. The advent of an increasingly sophisticated journal, Literature and Medicine, published first through the SUNY Press and later taken over by Johns Hopkins, offers a prismatic selection of writings in what is now an acknowledged interdiscipline. (I even recently discovered a journal for physicians as literary wannabes, though, with its pricey subscription rate of over two hundred dollars per year, it is perhaps a medical journal in drag!)

Most of us are familiar with the rationales keeping literature in a "handmaidenly" place, and perhaps the first advice to the would-be teacher of literature and medicine is not to contribute to the mistaken assumption that the arts are merely recreational, an arena for "self-expression." It is all too easy for the arts to be exploited in a medical context, to compensate for what is militaristic, depersonalized, and emotionally oppressive in medical education itself. Sometimes teachers of the arts and humanities conspire in their own exploitation by teaching merely "appreciation," or by assigning

high grades without requiring rigor of their students. They may even accept their discipline's secondary status. A colleague, when I asked why she was so deferential towards doctors in the medical school where she taught literature, replied, "What they do is important." Or the moral burden of the medical profession is displaced onto the humanities, mistakenly thought to sensitize people and make them more tolerant and "nicer." Yet if the humanities truly "humanized," there would surely be less backbiting and pettiness among humanists who have devoted years to their study. We should begin, then, by pointing out what literature is not, certainly not the "quick fix" for what ails medical training and practice.

One way to approach the science major, usually pre-med, is through language, the building block of literature and the pragmatic enabler of communication between doctor and patient. Not to share the same culturally spoken vocabulary leads to confusion between them, and, sometimes, to ethical dilemmas. We can engage literature and medicine through medical terminology, which, everyone agrees, matters urgently. In The Long Dying of Baby Andrew, Peggy and Robert Stinson, the parents of a marginally viable newborn, approve of a " ventilator" for their son because they do not recognize it as a "respirator," which they oppose. Their account of their tragic medical experience plays one mode of discourse off another: Robert's against Peggy's (and vice versa); both against the doctors'; the doctors' against one another; doctors against nurses; the hospital's medical records against everyone else's perception; and so forth. I extend "language" to include paralanguage through our viewing of "The Joan Robinson Story," a video documentary of a cancer death. We freeze frames and turn off the audio so that we can study the body language of doctor, patient, patient's family and friends; then we restore the soundtrack to experience, often, how what is said verbally conflicts with posture, gesture and facial expression. This exercise helps students to see that language is not an absolute or, perhaps, even a dominant means of communication.

As narrative, the patient's dialogic transcription into a "case history" bridges language and literature because it creates, in effect, a story. Whose story the case history tells is another question, usefully brought up later in our reading William Carlos Williams' first-person medical stories. (The ownership of the case history has begun to interest writers like Professor Rita Charon, who, teaching the humanities in a medical school, assigns medical students to write the vicarious autobiographies of their patients: writing as empathy. Yet may this assignment not re-empower the doctor by making him or her the voice of an illusory, interpreted patient, whose illness offers the occasion for narrative colonization? One wonders.)

Another frequent justification for teaching literature to medical students is based on the mistaken assumption that science deals with empirical and "proven fact," whereas literature depends on "ambiguity," something nearer the muddled stuff of lived experience than the cloistered conclusions of the laboratory. Literary works, however, actually falsify life because they are so often neatly conclusive, with a discernible beginning, middle and end; and, unlike experience, texts are subject to review and revision. The Medical Ethics student who reads and rereads The Long Dying of Baby Andrew may make her or his way through the ethical questions in that story, but, in the emergency room, will have to respond at once, perhaps instictively. We are left, then, with the problem of how to teach literature and medicine from some standpoint that makes

active, intellectual sense of both.

I construct my Literature and Medicine course around the disciplines' common share in metaphor, writ small as literary technique and large as our culture's systematic but unconscious representation of its values in medical education and practice. I design my syllabus to reflect this bias: that metaphor is the central and controlling element in all cultural communication. My perspective is Foucauldian without requiring that my students know Foucault. (The Birth of the Clinic is, of course, one of the usual texts in the History of Medicine and elsewhere, though I personally find Discipline and Punish more illuminating and actually more applicable to my course material.)

In the sciences, metaphor's presence is often denied altogether, so that, for example, numerical data tends not to be seen as metaphoric of a cultural "rewriting" of the body, or MRI imaging as its appropriation, or sonograms of the fetus as the erasure of the maternal body. Usually metaphor is considered, at best, as extraneous, and, at worst, as dangerous. I open my course, then, with a text that affirms this judgment, Susan Sontag's Illness as Metaphor, which argues that cultural stereotypes surrounding tuberculosis in the last century and cancer in this one are prejudicial to the patient and untrue to the experience and treatment of either disease. Literature, Sontag complains, perpetuates such stereotypes through its metaphoric transactions. In discussion, almost everybody in my class readily agrees with Sontag's well-argued position. But then I juxtapose a selection from Richard Selzer's Mortal Lessons in which the Dalai Lama's physician, visiting an American medical school, demonstrates his diagnosis of a condition the American doctor describes as "congenital heart disease....interventricular septal defect, with resultant heart failure":

> He [the Tibetan] speaks of winds coursing through the body of the woman, currents that break against barriers, eddying. These vortices are in her blood, the says. The last spendings of an imperfect heart. Between the chambers of her heart, long, long before she was born, a wind had come and blown open a deep gate that must never be opened. Through it charge the full waters of her river, as the mountain stream cascades in the springtime, battering, knocking loose the land, and flooding her breath. Thus he speaks, and is silent. (Selzer, 35)

I present this passage to introduce the cultural relativity of medical treatment and the use of metaphor as an accurate means of expressing a diagnosis. The episode also exposes students to the idea that cultural metaphors underlie both medicine and literature: medicine as a covert system of metaphors; literature as the frankly metaphoric.

We next reprise Sontag's writing to discover her metaphors in the service of anti-metaphor and then move on to selections from medical texts themselves. I have had success in presenting a historical cross section of descriptions of abortion in successive editions of Williams' Obstetrics, for example, to show students how a medical procedure, itself unchanged over time, is staged and interpreted according to the changing social mores of the day. Or I may substitute popular descriptions of conception over several centuries, exploring the political connection between, say, the homunculus theory and the structure of a single male-ruled monarchy; the "winner sperm" meta-

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phors of earlier in this century as the Horatio Alger plot of the "rugged individual," the naturally superior and successful hero; and the influences of feminism and social welfare programs on our contemporary construction of conception as a resistant ovum finally yielding to collective spermatic persuasion. In Selzer's "Abortion," heavily metaphoric like much of Selzer's work, metaphor may even reveal more than the author intends. "Abortion" describes a doctor-narrator's witness of a late-term procedure performed on the body of a Jamaican woman. Although the narrator declares that he supports abortion rights---as Selzer has told me personally that he himself does---the metaphors of the piece relentlessly identify teller with fetus: " I close my eyes. I see the inside of the uterus....I see the creature curled upon itself....The point grazes the thigh, and I stir. Perhaps I wake from dozing....The point probes, touches my belly" (158-59); finally, the fetus is identified with an artifact like the essay we are reading, "a signed piece, engraved with a hieroglyph of human genes" (160). Students usually debate where the author's convictions lie, but they often conclude that "Abortion" faithfully represents our societal ambivalence towards abortion itself. Selzer's "Abortion" also serves to introduce other issues such as the racial or racist implications of the woman's ethnicity and medical control of the female body. What signals are sent by the woman's being Jamaican? Why are both she and the nurses almost entirely silent? Because "Abortion" ends with the narrated delivery of an aborted but living fetus due to "mistaken dates," it raises the issue of medical calibration compensating for moral ambiguity. Why, for instance, do we judge the patient negatively because she is in her second trimester rather than the first?

As "Abortion" indicates, metaphor also leads us into questions of ethics. For example, in The Long Dying of Baby Andrew, the double journals of Peggy and Robert Stinson during the birth, suffering and death of their very premature baby, the students rediscover what Plato knew: that metaphor is deceptive. In the neonatal ICU ward, where a brisk and cheerful air of normalcy is maintained, the disastrous condition of the baby is passed off euphemistically: "He'll never go to Harvard," for instance, evasively "metaphorizes" massive brain damage and implicitly attacks the parents' concern about their newborn's intelligence as a form of snobbism. The hospital records, included in the Stinsons' book, betray the lies clinical data---the pretension of a metaphor-free language---can serve by relating negative prognoses grossly at odds with what the parents are told, and heavy-handed moral interpretations of the parents themselves. As for the Stinsons, they metaphorize their own experience through images of machinery, caught in the hospital protocols as in a relentless mechanism. They and their baby are "on a conveyor belt," in effect, being processed as a medical product. The belt moves. They cannot get off. Then we look at actual hospital pamphlets and selections from popular "how to do it" books for the parents of premature babies. There, the prevailing metaphor is of the "roller-coaster." By metaphoric implication, the ride will be scary and emotionally disruptive, with extreme (literal) highs and lows. But it was chosen---you get on a roller coaster voluntarily---and it is basically a recreation. The ride will end; you may even want a second trip. Using their respective metaphoric interpretations of their experience as our guide, we then "reconstruct" the roles of the doctors, nurses, and parents in the hospital theatre, with a view to an empathetic and compassionate understanding of their multiple and sometimes competing perspectives. Such readings in metaphor do not avoid moral implica-

tions, but neither do they define them so closely that students must take sides on texts that must be reduced to tracts.

By opening up literary metaphor into cultural metaphor, and by steering away from the hopeful but untrue direction Sontag initially took, I hope to awaken all my students to the influence of hidden allegory in medical situations---in effect, adopting a Foucauldian perspective without the Foucault. The "hidden allegory" is often political, just as the real agenda is often economical. The modern Western body is assumed to be a healthy ("pure") and yet vulnerable individual zone, which disease and injury "invade" from without; hence, the "war against" cancer or AIDS or the cause of the moment. We might read, then, Lewis Thomas's essay on meningitis as the immune system's overeaction to the relatively benign and common meningococcus in The Lives of a Cell. Or we might compare the naming of the parts of the modern body to the naming of geographical phenomena in early colonialist maps of America. The comparison gives rise to many questions. Is naming the same as owning? Is naming an aspect of control? What is the purpose of professional jargon and why are medicine and law the remaining professions in which Latin is commonly used? If I am teaching The Death of Ivan Ilych that semester, we look at Tolstoy's description of medical consultations to provide some possible answers.

If one object of literature and medicine is to find common ground between the disciplines, slighting neither of them, then, I believe, studying metaphor and representation as cultural phenomena common to each, does justice to both. Just as premedical students need to acknowledge the complexity of representations and its influence on seemingly "objective" scientific training, so students of literature need to demystify the sciences, acquire the "foreign" language of medical terminology, and develop at least a passing acquaintance with The Physician's Desk Reference, or some confidence in reading and understanding an article in The New England Journal of Medicine.

Recent developments in Literature and Medicine suggest that the handmaidenly days are on the wane. Books like Kathryn Montgomery Hunter's Doctors' Stories: The Narrative Structure of Medical Knowledge promote literature as a way of seeing medicine and as a new way for medical personnel to see their discipline and themselves. As listeners and speakers, as seekers of healing and as healers both in the classroom and in their future lives, students can only recognize "informed consent"---or dissent---when they have made their way through the labyrinth of cultural metaphor. In the last analysis, the interdiscipline of literature and medicine is distinctive because it always implies praxis: the lived application of the metaphoric nature of all texts. In order to close the rift between literature and science, and in order to end with the example of a doctor who is also a superlative American writer, I conclude the syllabus with a selection of William Carlos Williams' medical stories from The Farmers' Daughters (Norfolk,Connecticut: New Directions, 1961): " A Night in June," "A Face of Stone," and "Jean Beicke." All of these accounts testify to medicine as an imprecise art, and to the act of treating a patient as one of self-discovery and humanizing for the doctor, uniting the healer and the healed.

I find it significant that when two sciences, "masculine" fields of study, ally, they often produce a new discipline in which there is no conjunction or hyphen to indicate the coupling of difference: Biochemistry or Astrophysics, for instance. They may even

be dignified as a department, a political unit in the university structure. Where one of the fields is outside science but honorarily "male," a program or an institute or center may result, especially in the case of Bioethics. Far fewer are those examples of what is called "medical humanities," and the term itself suggests that medicine dominates, and that the humanities, adjectivally colonized, are a subset of it.

Sexual distinctions carry over into the very texts available for such a course as mine. While doctors have and do write abundantly, and while medical practice remains a fascinating literary subject in itself, literary works by women physicians and by nurses,in particular, are much scarcer.

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The Competing Paradigms of Liberal and General Learning and Monroe Community College's Infusion Model

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**"It is easier to move a graveyard
than to change a curriculum."**
— Woodrow Wilson, Pres.
Princeton University, 1904

Yesterday and today, as evidenced in the following excerpts, the difference between liberal and general education paradigms remains unclear and indistinct.

1829 "The two great points to be gained in intellectual culture, are the discipline and the furniture of the mind; expanding its powers, and storing it with knowledge. The former of these is perhaps, the more important of the two."

Original papers in relation
to a course of liberal education.
Yale Faculty Report

1898 "No longer will college graduates have knowledge of the same subjects, share precisely the same intellectual pleasures, or cultivate the same tastes as their fathers or even their fellow students... No longer do students need to progress like soldiers on parade"

Charles W. Eliot
Educational Reform

1899 "Knowledge is in no case an end in itself but is a means, an instrument, for the development of character and for the enrichment of the life experience."

John Dewey
**Lectures in the Philosophy
of Education: 1899**

1936 "We can never get a university without general education. Unless students and professors (and particularly professors) have a common intellectual training, a university must remain a series of disparate schools and departments, by nothing except the fact that they have the same president and board of trustees"

"An education that consists of the cultivation of the intellectual virtues, therefore,

is the most useful education, whether the student is destined for a life of contemplation or a life of action."

Robert M. Hutchins
Higher Learning in America

1945 "...a quest for a concept of general education that would have validity for the free society which we cherish.... liberal education, a core curriculum of six required courses...the sole means by which communities can protect themselves from the ill effects of over-rapid change."

General Education in a Free Society: Report of the Harvard Committee on the Objectives of General Education in a Free Society

1947 "... re-examine higher education in the light of the social role it has to play... general education is the transmission of a common cultural heritage toward a common citizenship."

Higher Education for an American Democracy

1959 "The one intolerable thing in education is the absence of intellectual design."

Mark Van Doren
Liberal Education

1969 "When we put together in one scheme such elements as a prescribed curriculum, similar assignments for all students, lecturing as almost the only mode of instruction, standardized tests by which all students are externally evaluated, and instructor-chosen grades as the measures of learning, then we can almost guarantee that meaningful learning will be an absolute minimum."

Carl Rogers
Freedom to Learn

1980 "General education refers to just one part of the undergraduate program. Liberal education includes the total experience. Ideally when all the pieces — general education, the major, electives, and nonclassroom activity - are effectively combined, liberal education occurs."

Ernest L. Boyer & Arthur Levine
A Quest for Common Learning: The Aims of General Education

1982 "We need more college programs in which the major course of study offered is common to all, with but a few if any electives permitted.

Mortimer H. Adler
The Paideia Proposal:
An Educational Manifesto

1987 "General education is an integrated core of common learning. General education is not single set of courses. It is a program with a clear objective, one that can be achieved in a variety of ways."

Ernest L. Boyer
College: The Undergraduate
Experience in America

1989 "General education is a required course of studies a core of learning."

Lynne V. Cheney
50 Hours: A Core
Curriculum for College
Students

Because of the underlying confusion of terminology as well as the paradigm shifts reflected, it is obvious that these excerpts are not referring to the same thing. However, if colleges are to respond adequately to the current interest being voiced by state education agencies and special interest groups requesting general education's inclusion into the college curricula, it is imperative that the campuses have a clear and distinct understanding of the liberal and general education paradigms.

LIBERAL EDUCATION IS NOT GENERAL EDUCATION

It is important to note that liberal education greatly differs from general education in its underlying assumptions, ideological orientations, pedagogical methods, curricular structures, and ultimate aims.

Differing Assumptions

Liberal and general education paradigms are axiomatically different. Where liberal education's micrological weltanschauung presupposes an objective basis of reality, comprised of fixed laws in which knowledge is content, general education's macrological world-view, on the other hand, presupposes a more subjective basis of reality comprised of uncertainties, where knowledge is simply an instrument used for the development of character and for the enrichment of the life experience.

As a well established paradigm in higher education, liberal learning is grounded in rationalism's objectivist assumption of the existence of an independent reality consisting of fixed laws and absolute truths, where knowledge per se is the object of human learning and inquiry. Since knowledge retains this character of a body of truths and principles discovered by great thinkers and set down in significant tomes, the uncovering of these truths and principles are of primary importance (Bloom, 1987). Because this paradigm, in effect, holds that knowledge as **content** resides within disciplines or fields of study, educational reform becomes simply **a curricular realign-**

ment and/or refinement of a common core of courses.

General education, on the other hand, is grounded in instrumentalism's subjectivist assumption of the psycho-physical interdependent nature of reality, where the knowledge of "things" is always limited by the impossibility of ever getting outside oneself; where reality, as such, is always perspectival, i.e., incomplete, and truth—if not relative—is, at most, relational. It assumes that knowledge is the result of the meaning-bestowing process; a process described by phenomenologist Merleau-Ponty (1961), where order is continually made out of disorder by our ability to give meaning to our experience. This paradigm assumes, then, that knowledge as **instrument** resides outside the purview of individual fields of study so that educational reform becomes more **an outcomes readjustment associated with an integrated core of common experiences.**

Differing Orientations

Liberal and general education paradigms have different persuasions. Where liberal learning is basically essentialistic in which the disciplining of the mind and the transmission of the intellectual culture are primary, general education is basically existentialistic, where personal and social growth through the learning of new ways of reorganizing experience are primary.

As a liberal culture paradigm, liberal education is attracted to the enduring truths of Antiquity as the schema by which students are guided in the present (Van Doren,1959; Adler,1986; Bloom,1987). Basically determinate in its orientation, its adherents teach a common body of knowledge to all students so that these novitiates may participate in what Michael Oakeshott (1962) calls the "Conversation of Mankind."

> Education, properly speaking, is an initiation into the skill and partnership of this conversation in which we learn to recognize the voices, to distinquish the proper occasions of utterance,and in which we acquire the intellectual and moral habits appropriate to conversation. And it is this conversation which, in the end, gives place and character to every human activity and utterance. (198-99)

However, judging from general education's subjectivist assumptions, its orientation is basically inclined toward an existentialism and as such focuses on education for personal and social action. Basically then as indeterminate, general education's orientation, like today's quantum mechanics, is concerned with ways of overcoming the **prejuge du monde** created by an intellectual structure, or abstraction, called the "world image" (Planck,1963). It emphasizes experimentation and problem solving as it focuses on the immediate needs of the students and their future. This means that in general education the subject- matter is viewed instrumentally as the learning of new ways of experiencing; Dewey's "reconstruction of experience" (1916).

Differing Methods & Structures

Liberal and general learning paradigms differ as to their pedagogical methods and curricular structures. Where liberal education approaches teaching from the curricular standpoint of the **unity of study**, general education, on the other hand, approaches teaching from the curricular standpoint of the **unity of inquiry**.

The liberal learning paradigm is based on rationalist assumptions and relies on methods based upon the "formal discipline" theory of learning in which certain prescribed studies are seen as good for the mind. From this objectivist epistomology comes an objectivist pedagogy, where learning is conceived as a form of assimilation. Formal lectures and mentoring are its preferred methods, whereby students become intellectual consumers of the "Great Tradition" of attitudes, beliefs and bodies of knowledge (Van Doren, 1959). Structurally speaking, it is discipline-centered and as such is concerned with the **unity of study,** where through reason and logic students are guided through a core of studies toward "eternal verities." Pedagogically speaking, it advocates a prescribed curriculum of essential subjects as reiterated in the "50 Hours" core curriculum approach (Cheney, 1989).

The general education paradigm, however, from its assumptions based on instrumentalism relies on methods of teaching based upon developmental psychology's understanding of mental functions and human behavior. From this subjectivist epistomology comes a subjectivist pedagogy, where students are viewed as active partners in a "community of learners." It favors a more collaborative learning instructional motif, where teaching and learning are viewed as social acts. Structurally speaking, it is student-centered around the unity of inquiry and as such is concerned with the student's total learning environment i.e.,curricular, co-curricular, community and the like. In point of fact, it approaches curriculum not only from the standpoint of the interdisciplinarity of content but also from the perspective of education as "an experience underlying the unity of knowledge" (Dewey,1916, 76).

Differing Aims

Liberal learning's aim is the disciplining of the mind through a prescribed common core of learning. General education's aim, on the other hand, is the empowering of the individual through a common core of experiences.

Liberal learning's aim is in Robert Maynard Hutchins' words "the cultivation of the intellect" (1936, 67). Its first and foremost goal, then, is the mental disciplining of the Jeffersonian **aristoi** through the teaching of a prescribed content. This means that the transmission of the liberal culture and right reasoning through a core curriculum of essential knowledge are the ultimate aims of liberal education; so educational reform **centers on determining which sequence of courses** will strengthen the mind and transmit a level of "cultural literacy" deemed appropriate.

General education's more pragmatic aim, on the other hand, is the development of behaviors and actions through **praxis**, action based upon reflection. This empowerment aim echoes Ralph Waldo Emerson's exhortation (1838):

> One would rather be
> "A pagan suckled in a creed outworn"
> than to be defrauded of his manly right
> in coming into nature and finding not names
> and places, not land and professions, but
> even virtue and truth foreclosed and monopolized. (9)

As an expression of pragmatism, general education, then, is concerned first and fore-

most with students and their relationships with their community. Knowledge as such is not an end in itself as it is in liberal learning but an instrument for personal/social growth and action. Needless to say, reform **focuses on programmatic changes** that will enhance the personal and social development of students.

In sum, then, liberal and general education paradigms are vastly different in many respects. This means that unless these powerful paradigms are clearly understood and respected, the advocates of reform will continue to speak at cross-purposes, resulting in a cacophony of confusion and a gridlock of curricular stasis.

Monroe Community College's Infusion Model

Campuses use one of the following "gen ed" delivery models:

CORE CURRICULUM ———a prescribed set of "freshman experience" courses

DISTRIBUTION "MENU"—a list of divisional offerings from which selections are made

CORE & DISTRIBUTION—one or two prescribed courses plus a list of divisional offerings from which selections are made

INFUSION ————————an integration of identified competencies & learnings into established curricula.

Monroe Community College chose an infusion model to meet the needs of its diverse population and its diverse functions of serving the university parallel, career/occupational, developmental/remedial, and continuing education/community service postsecondary needs of its community. This decision to reexamine the "general education" requirements was prompted by the nationally publicized need for revising the general education curricula to prepare future graduates for the 21st century (Building Communities. 1988; Bauman, 1989; Cheney, 1989). Three focus groups reviewed the "gen ed" requirements and reported their findings in **Education in the Future Tense** (Erickson, 1990).

THE LEARNERS 1990-2005 focus group found that, although recent high school graduates will continue to make-up a large percentage of the matriculated cohort (Osborn, May 1989), the student population will likely see an increase in students of Hispanic, African-American and Asian decent, while there will be a decrease in the percentage of non- hispanic Whites. The number of students hitherto considered non-traditional such as part-time students, single-head of households, and immigrants will increase as will students from the unemployed and underemployed ranks, who will attend MCC for the purpose of retraining in new job skills or for improving basic skills and competencies (Warren, 1985; Hodgkinson, 1985; Hodgkinson, 1987, Bouvier & Briggs, 1988; Elkhawas, 1989; Osborn, November 1989).

THE COMMUNITY OF COLLEGES focus group, through an examination of the current literature and by surveying other institutions of higher learning, found

that, although there were many general education models, none existed which addressed the needs of the future and the future students. Most curricular models investigated entertained the subject-centered, university/liberal arts model, where a select number of core courses is required of all matriculated students regardless of Academic Major (Hirst, 1965; MDCC, 1982; JCCC, 1988; Carballada, 1989, Cheney, 1989).

THE COMMUNITY/WORKFORCE focus group found through surveys, transfer and placement data, and community contacts that receiving institutions of higher education as well as employers were seeking graduates who have a command of English, have reasoning and problem-solving skills, have effective reading, writing and computation skills, and have a working knowledge of science and technology. Many graduates were perceived by the community-at-large as lacking a common core of "general education" learning outcomes. Putatively, these graduates were leaving the institution as specialists, while the community and nation are seeking graduates who are more in the way of generalists, capable of advancing and enhancing any enterprise of which they are a part (Johnson & Packer, 1987; Tucker & Mandel, 1987; Carnevale et al, 1988).

From this information GENERAL EDUCATION CORE COMPETENCY GOALS were formulated with specific Learning Outcomes. These Learning Outcomes (specific, observable student behaviors or products) specify what the students are to do, the circumstances under which they are judged, and the degree of performance accuracy expected (Morris & Fitz-Gibbson, 1978; Mager, 1984;). In other words, these Learning Outcomes are behavioral objectives written in concrete measurable terms. Instead of a core of courses all students are required to complete, the infusion model mandates that a common core of learning competencies, or outcomes, are to be mastered along with the specific requirements of the academic majors.

CONCLUSION

When campuses consider any approach to curricular reform, they need to come to a consensus as to their mission, pedagogy, and the political/ social/economic milieu of their respective communities. Underscoring this consensual process is the imperative that all the concerned parties must have a clear and distinct understanding of the liberal and general learning paradigms. Campuses that fail to distinguish between these paradigms will be unable to respond adequately to curricular reform.

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Theoretical Models of Curriculum Integration for Postsecondary Curriculum: A Historical Perspective

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Historical Overview

Debates on the nature of the disciplines and the content of the curriculum date to the time of Aristotle, who wrote that "mankind are by no means agreed about the things to be taught" (Jowett (Trans.), 1921, p. 1338). Though the word curriculum is a relatively modern term, it is derived from the Latin, curriculum, a "race course" or "chariot race." It was first used as part of a book title by John Dewey in 1902 for his book, The Child and the Curriculum. The term "core curriculum" dates from the nineteenth century work of the German philosopher, Johann Friedrich Herbart, while the term "general education" is much more recent, dating to the mid-twentieth century.

Though questions of disciplinary organization have been considered since the disciplines were conceived, one period that was very significant for current advocates of curriculum integration was the period from 1890 to 1910, when the American disciples of Herbart, exemplified by educators such as Francis W. Parker (1894) and Frank McMurry (1895) debated for curriculum "concentration" and "correlation" against advocates of a subject-centered array of disciplines as the course of study. Herbart believed that the purpose of education was the development of character, and that the basic three R's were too mechanical and restrictive to foster the interest in studies necessary for character development (Tanner & Tanner, 1980). Integrity as a human being would be developed through the unity of the disciplines, which would make the curriculum more relevant for the learner. This unity would be achieved, according to Herbart, through concentration in a subject such as literature, with the other subjects studied in correlation to the core, and through following five steps in teaching: preparation, presentation, association, generalization, and application (DeGarmo, 1912). This theory was adamantly opposed by a major figure in conceiving the American curriculum, William Torrey Harris, United States Commissioner of Education from 1889 to 1906, who believed that a classic, liberal education was the best education for all students (Tanner & Tanner, 1980).

Herbart's theory was also opposed by the Committee of Ten, a committee that included five college presidents and five subject area experts. These ten influential men were appointed by the National Education Association to standardize the curriculum for students who were entering college. The Committee, chaired by Charles Eliot of Harvard University, presented its report delineating the optimum secondary curriculum for all students in 1893. They concurred with Harris in espousing the belief that the best education for the college bound, the classical liberal arts curriculum, was the best education for all students. At the same time, the Committee created the forerunner to the tracking system that the school restructuring movement is attempting to eliminate in high schools today (See Oakes, 1986 and Sizer, 1992). The Modern Languages and English sequences for the non-college bound were meant to be the

"inferior" tracks, while the Classical and Latin Scientific courses of study were to be the "superior" tracks for the college bound (Eliot, 1893). The report had three major effects on the curriculum: the perpetuation of traditional subjects and methods at the secondary and postsecondary levels; the defining of the curriculum by subject matter experts; and the inextricable binding of the secondary and postsecondary curricula, making discussions of one without discussions on the other virtually impossible.

Curriculum integration enjoyed a resurgence in the 1920's, when the number of students graduating from high school almost doubled from 8.8% in the previous decade to 16.8% (NCES, 1993). Philosophers of the period such as James Harvey Robinson (1924) and Alfred North Whitehead (1929) spoke against the isolation of the disciplines and the fragmentation and irrelevance of the curriculum. Whitehead, in a series of lectures that were later published, said:

The solution which I am urging is to eradicate the fatal disconnection of subjects which kills the vitality of our curriculum. There is only one subject- matter for education, and that is Life in all its manifestations. Instead of this single unity, we offer...Algebra from which nothing follows; geometry, from which nothing follows; History from which nothing follows...The best that can be said of [this] is that it is a rapid table of contents which a deity might run over in his mind while he was thinking of creating a world, and had not yet determined how to put it together" (1929, p.18).

A look at a typical high school or college catalogue of course offerings today serves to reinforce Whitehead's image of a table of contents. Indeed, many general education and core curriculum requirement designs are based on an array of courses in a number of disciplines and not on integrative themes or what Tanner and Tanner (1980) call "broad fields."

In the Twentieth Century, periodic calls for a move "back to basics" or to do away with "frills" have led to segmented conceptions of curriculum, while calls for relevance have led to curricular models that are more integrative. During the Depression years, when the number of students graduating from high school rose above 50% (NCES, 1993), a report by the Educational Policies Commission (1944) on secondary curriculum designed to meet the needs of youth brought forth much criticism from university academics. One of the most vocal critics of the integrated curriculum at the secondary level was Arthur Bestor of the University of Chicago who advocated a foundation in the disciplines in high school and an integrated core curriculum in college (1956). For students whose education ended with high school, Bestor suggested an integrated course in the senior year; but for those who were going on to postsecondary education, he thought it more appropriate to wait until the college years.

Soon after World War II, an important report was issued by Harvard University on the general education curriculum. It was significant that the Harvard Committee used the term general education instead of liberal education. In fact, one of the Committee's goals was to open the conception of a liberal education to more than just the privileged few, but at the same time to prepare students for life and work. This was, in part, another response to the increasing number of students graduating high school and attending college. Noting the pattern of pendulum swings in both secondary and postsecondary education that had occurred since the 1890's, from curriculum integra-

tion to "back to basics," the report stated:

> In a natural reaction against the inherited type of formal and bookish learning, educational practice has tended to swing to the opposite extreme and to replace the courses of the curriculum with highly specific and practical courses. The danger here is that training is being substituted for education. More recently a reaction to the reaction has appeared that would place great books in a central, even monopolistic, position and which tends to identify education exclusively with cultivating the ability to think" (p.176).

The Cold War years proved to be a time of disciplinary curriculum while the calls for relevance and affective education in the late 1960's and early 1970's resulted in less disciplinarity, but generated other forms of fragmentation. Groups with different ideologies and interests gained a voice in curricular decisions until a "back to basics" movement again prevailed in the 1980's, revealing curricular swings with roughly ten year intervals during this century.

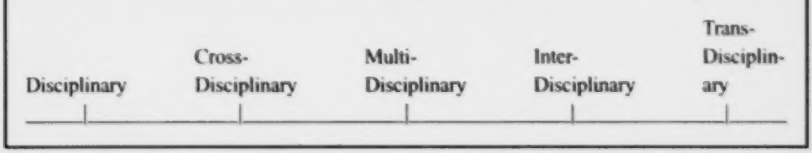
Curriculum Theories

Disciplinarity

Tanner and Tanner (1980) delineated four major constructs for organizing knowledge in the curriculum at all levels 1) disciplinarity, 2) correlation, 3) fusion, and 4) broad fields (p.464). These constructs represent a continuum of models from the least integrated to the most integrated.

Figure 1

Continuum of Models of Curriculum Integration



Tanner and Tanner (1980) viewed disciplinarity as inadequate in solving complex problems such as the energy crisis or the environmental pollution problems experienced by society. They argued that since the purpose of general education in a democratic society is to produce enlightened citizens capable of personal-social problem solving, educators must look toward integrative models of curriculum organization to prepare students to become enlightened citizens.

An advantage of disciplinary studies is that they provide students with discernable bodies of facts, principles, skills, procedures and terminology. Disciplines usually correspond to domains of knowledge that are important to society and function to sustain the culture's economic, social or other needs (Csikszentmihalyi, 1990). They also produce cultures of their own with practitioners who work in the domain or discipline and who contribute to knowledge in the area. Practitioners in a discipline share a range of skills and knowledge that they apply in solving problems in the field. They use a repertoire of laws, theories, and modes of inquiry in their work and in the development of expertise in a domain (Kornhaber & Gardner, 1993).

The disciplines also provide students with avenues for the development of excellence and for recognition of expertise. Other practitioners and connoisseurs in a field recognize an individual's flexible use of the field's knowledge, skills and principles in successfully solving complex problems (Kornhaber & Gardner, 1993). When the curriculum provides students with the opportunity to solve complex problems, the students have more opportunities to develop expertise and achieve recognition, thus motivating them to develop further. However, complex problems are interdisciplinary and usually not based solely in one field of knowledge. Thus an interdisciplinary or transdisciplinary curriculum model would be required to provide opportunities to develop expertise in solving complex problems.

Correlation or Cross-Disciplinarity

One of the primary concerns of the post-modern era and a major part of the rationale for curriculum integration has been the exponential growth of knowledge and the complex and multidisciplinary nature of societal and global problems (Jacobs, 1989; Petrie, 1992). These arguments are used to emphasize the constraining limitations of a disciplinary point of view on the curriculum and to urge educators to find alternative models. A model of integration that may be considered to be one step removed from disciplinarity, but which is not pure integration is the correlation or the cross-disciplinary model (Tanner & Tanner, 1980). In this model, an effort is made to develop relationships between two disciplines, but maintain disciplinary divisions. This usually occurs between history and English or mathematics and physical science. It is the easiest form of integration to implement, and generally brings out chronological relationships. For example, a literature class may read works from Colonial America while the history class is studying that period. These subjects may be scheduled back-to-back or in a double block so that instructors may share students and group them according to their instructional needs.

Multidisciplinarity

Multidisciplinarity, according to Petrie (1992) is exemplified by a group of practitioners in several fields working to solve an interdisciplinary problem. This generally occurs in many contexts including the sciences, in health care, on special education teams, and in productions in the performing arts. In general education course requirements, since each practitioner or instructor maintains a disciplinary point of view, integration is left to the individual students and is not planned. This is a superficial form of integration. General education programs with distribution requirements are examples of multidisciplinary curricula. Without glue such as a number of broad themes to tie the different courses and fields together, there is little deep understanding of how the courses and disciplines relate to each other, understanding that enhances learning (Anderson & Pearson, 1984; Gardner, 1983; Perkins & Salomon, 1987).

Interdisciplinarity

The fusion (Tanner & Tanner, 1980) or interdisciplinary (Petrie, 1992) model is one that has been increasingly accepted across the disciplines. The fusion of several disciplines to form the social sciences is one view of this construct. Another is represented by the fusion of botany, zoology, anatomy and physiology into the larger field of biology. At the secondary level, there is a move toward the elimination of the "layer cake" science curriculum of biology, earth science, chemistry and physics, each of-

fered during separate years in high school, to an interdisciplinary view of all them each year (Petrie, 1992). Whole fields representing the fusion of knowledge domains have been formed and become accepted as courses in the curriculum as well. Examples of such fusion are biophysics, electrochemistry, and ethnomusicology.

Transdisciplinarity

Transdisciplinary curriculum models are best exemplified by the broad fields notion of Tanner & Tanner (1980). They cite the general education requirements of the University of Chicago in the 1940's as an example of a broad fields model. Students were required to take courses in three broad fields: the social sciences, humanities, and natural sciences. Special courses were developed to synthesize knowledge in each field in the broader constructs, so that the social sciences requirement was met by taking a two year sequence of social science 1, 2 and 3. Social Science 1 was organized around the issues of American democracy. Social Science 2 focused on the themes of the individual and culture in industrial society, and Social Science 3 centered on freedom and control. Readings for each course focused on the classics in the fields incorporated in the social sciences as well as on the work of contemporary authors. Recently, the problem of the choice of "classics" in this type of curriculum has been discussed extensively in terms of multicultural education, gender issues, and inequality of opportunity reflected in the curriculum (Ogbu, 1978; Green, 1987; AAUW, 1992).

Tanner and Tanner cite the University of Chicago as one of the most significant and progressive postsecondary institutions in its general education program. Today, students there may choose one of three themes to organize their sequence of courses in the broad fields of the humanities, social sciences, physical sciences and biological sciences. The concurrent use of broad themes and broad fields makes this general education curriculum unique among postsecondary institutions.

Another transdisciplinary model, the core curriculum, focuses the general education requirements on themes or problems while maintaining separation between the various disciplines. Indeed, the focus on problem solving is a key feature of an integrated curriculum (Tanner, 1989). An institution may choose to focus on broad generalizations or "common understandings," or large societal problems with courses in the disciplines revolving around those themes in the general education program. These courses form the core curriculum, which is a requirement for all students, no matter what their major. A problem that arises with an integrated core curriculum focused on themes or problems is that there are few materials and no appropriate textbooks for instructors to use in core courses. Generally, institutions create their own materials or basic units to be used in these classes, making it a difficult proposition to revise and adjust core curriculum courses or the general education program.

Conclusion

The debates on which models of organization most effectively present knowledge and modes of thinking necessary to create a broadly educated citizenry continue to rage today. From Bloom's (1987) alarming critique of the postsecondary curriculum as being in the midst of an intellectual crisis to D'Souza's (1991) equating the blending of the traditional disciplines with a lowering of standards, the traditional perspec-

tive seems to be thriving. More voices have entered the fray, with calls for multicultural and feminist perspectives and the inclusion of those whose work and cultures have been omitted from the core curriculum or those who have been repressed by what was termed a "liberal" education. Petrie concluded that "such debates are to be expected and even welcomed as we try to achieve increasingly better ways of dealing with the world in which we live" (1992, p.319). However, the debates should not be left to rage on while the curriculum remains stagnant. The conception of a general education is by nature a fluid one, flexible enough to acknowledge new knowledge and the inclusion of voices heretofore silenced and omitted. These voices may include new fields, born through the fusion of old ones or through new and expanding knowledge, or cultures and groups of people who were historically disenfranchised and without the power to be considered a part of the history.

No matter what one chooses as a curriculum construct or conception of the general education curriculum, in viewing the debates over this century, it is clear that there have been ongoing attempts to adapt the curriculum to the changing needs of students and society. The best adaptations have attended to the needs of both, leaving room for revision and change while striving to maintain balance between the disciplinary and theoretical and the integrated and practical. With careful consideration of curriculum decisions through systematic study of the options and sensitivity to the context, an integrated general education curriculum can be a powerful and empowering curriculum design.

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Writing to Learn: Learning to Write

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Some History. ID103: Communication I was launched, along with the rest of the Interdisciplinary Core, in fall of 1990 at Moravian College. That date marked the culmination of more than six years of studying and planning, drafting, revising, and voting by faculty committees and the faculty as a whole as the Interdisciplinary Core curriculum was molded.

One subcommittee was given the task of developing some kind of freshman composition course or courses to provide first-year students with instruction and practice in reading, writing, speaking, and listening skills. This subcommittee went to work in earnest in the fall of 1987. It had an interdisciplinary makeup from the beginning: chaired by a member of the English Department (who is one of the tri-authors of this paper and an instructor of one section of the present Communication I course) and consisting of two English Department colleagues and one each from the Sociology and Economics and Business departments.

An early model of the new composition component called for a two-semester sequence of courses. This idea grew largely from the frustrations English Department faculty felt with the existing one-term freshman writing course, which seemed to entail too much work and learning to accomplish in just one semester. The two-term sequence eventually proved to be a pipe dream, however, largely because of the impact it would have on an already understaffed English Department faculty. Even though from the beginning of the hard planning, there was every intention to staff the new composition component from outside the English Department as well as from within, our dean was faced with robbing Peter to pay Paul: Every teacher, from no matter what department, who taught in the new Core curriculum would be one less teacher to cover the usual departmental offerings.

Our original plan for a two-course sequence was fairly quickly whittled down. The title of the current course--Communication I--is a vestige of those heady planning days. There is no "Communication II." In its place, more or less, is ID107: the Core Seminar--a writing-intensive course, but not a writing course per se, that caps the Core experience for students.

The composition subcommittee of the Core Curriculum planning committee drew up several scenarios for the course or courses it was considering. The very practical problem of deciding what kind of reader might be adopted for the new course led to the idea of linking the composition course or courses with another first-year course in the Core. So one of these early draft plans envisioned the communication course--as it came to be called, inasmuch as it sought to include oral as well as written communication and reading as well as writing--as a sort of lab course for the first semester of the new Western Civilization course. (That course would later be christened "Macrocosm/Microcosm" [hereafter Macro/Micro] for reasons that are too complex to go into here.) The problem of a reader was eliminated; the reader would be whatever textbook or books were assigned in the Macro/Micro course. As a lab course, Communication I

(hereafter Comm I) could be highly writing intensive because class time would not have to be devoted to discussion of assigned content-area readings; that would be taken care of in the Macro/Micro course. Thus, the Comm I teachers could concentrate their efforts on teaching writing. Or on coaching writers--because we saw ourselves, at least in the planning stages, as helping students write for another course.

It was also important to the planners that the writing we were asking students to do be realistic: We wanted to reduce the artificiality of the assignments in the typical freshman writing course, assignments that we pretended were meaningful because they were academic writing but which some of us saw were to a degree phony because they were not being done for a subject area course. Having the writing assignments grow, at least in part, out of work in the linked course addressed this concern.

To take that idea a step further, we boldly decided that the grading of final drafts of papers produced in our lab course would be shared between the Comm I and Macro/Micro faculty. The Comm I teachers had a stake in this grading because they were shepherding students through the writing process for each paper; the Macro/Micro teachers had a stake because it was their course the students were writing for. Joint grading, we also felt, would send an interdisciplinary message back to the students.

WRITING TO LEARN

Writing as Process. Our references to "the writing process" here may require a little bit of explanation. A process approach to writing and the teaching of writing has generally replaced the old paradigm of emphasis purely on the product of writing. If that sounds jargonistic, in-plainer terms it means that formerly, composition instructors would assign a paper, give a due date for it, probably discuss whatever readings were supposed to serve as rhetorical models, stimulate their students to no end with lectures on the thesis statement, the opening paragraph, and transitions, collect the papers, grade them and return them. Most of the time, students would write their papers the day or two before the due date, having duly absorbed all the lecture and discussion material offered in class between the date the paper was assigned and when it was due. Sometimes, often enough, students would write and be graded on in-class papers. This kind of pedagogy was widely practiced in composition courses until the early '80s. The entire emphasis was on the final written product, and the method encouraged a writing strategy in which the first draft and the final draft were basically identical.

But composition researchers such as James Britton, James Kinneavy, Mina Shaughnessy, Elaine Maimon and others recognized that, outside of the classroom, nobody wrote that way, so why should we teach our students such practices? Everyone, every academic at least, who has ever written anything serious for an audience knows that she or he drafts, revises, seeks the opinions of others, revises some more, and finally cleans up the little details of a piece of writing before submitting to whatever journal or committee it is going to. From this awareness of actual writing practices outside the artificial environment of the classroom came a reorientation of composition pedagogy to a process approach. The usual schemata for this divides the process into four stages: prewriting, drafting, revising, and editing. These stages are not purely linear, although they do form a progression from thought to final written product. They are more nearly recursive, as a writer in revising, for instance, may go

back to a prewriting or planning stage and work up or draft new ideas from there.

This new model for teaching writing in the classroom has not meant the elimination of graded final products (although some proponents of the process approach have made tentative calls for the elimination of grades on the products). What it has meant is fewer papers per semester with longer periods of time between the assignment and final due date. In between come due dates for some quantity of prewriting, a first draft, one or more revised drafts, and an edited pre-final draft. And the focus on process has also permitted and encouraged direct intervention by the writing teacher in the students' writing processes--by reading and commenting on preliminary drafts, for instance. A process approach to writing has been the operative model in the required freshman composition course at Moravian since 1982.

One of the leaders of the move from the product to the process model--and in some ways one of the more radical thinkers--has been Peter Elbow. His book Writing Without Teachers showed that teacher intervention in students' writing processes was neither essential nor even always good. He argued that teacher involvement, or too-heavy teacher involvement, at any rate, actually inhibited students in developing writing skills because it allowed students to avoid taking responsibility for their own thoughts and words and writing. His work has been very influential in a movement within the process approach toward peer tutoring and student collaboration in the composition classroom.

In 1989, St. Martin's Press brought out a composition textbook by Elbow and his colleague Pat Belanoff that jumped with both feet into the collaborative approach. It's called A Community of Writers, subtitled A Workshop Course in Writing. Before the Comm I course ran for the first time in fall of 1990, two of our English Department faculty who had been involved from the start in the Core composition course planning and who were to teach in the new course used portions of the book in their sections of the regular freshman writing course at Moravian. They got their feet wet in a workshop approach to teaching writing, and they found that indeed they did not have to directly supervise and intervene with every student's work as he or she proceeded from prewriting to final draft. They found that students could, with guidance and direction, do much of the teaching of each other.

In a way, this experience was the final piece to fall into place as the Comm I course was being planned. The subcommittee, now consisting of the four English Department faculty who would teach the sections of the new course, decided to adopt A Community of Writers as the primary text for the course, with, of course, the content area readings still coming from assignments in the Macro/Micro course.

LEARNING TO WRITE

Course Structure and Mechanics. Comm I meets three times a week for 50 minutes immediately after Macro/Micro. Students usually come to class with writing they have prepared to discuss--freewriting, process entries on various types of writing, a combination of these two, or paper drafts. Most of the class time is spent using a workshop format where students break into small groups to read, listen, and comment upon the work of their peers. Part of the package students get when they buy A Community of Writers is a slim booklet entitled Sharing and Responding, which contains ten different methods for giving feedback to a peer's writing as it is evolving

of these methods of responding.

We have elected not to devote class time to teaching grammar, though it is clearly taught informally through written comments on papers. Instead, we assess student ability with a grammar quiz in the second class meeting and use the results to tailor a program of study for each student. Students have a grammar workbook, based on Diana Hacker's Bedford Handbook for Writers, and they are encouraged to do exercises relevant to the deficiencies detected by the quiz. In lieu of a traditional final examination, students take a second comprehensive grammar quiz that counts toward their final class grade.

Outside of regular class meetings, students are encouraged to obtain assistance with their writing from peer tutors at the College's Writing Center. Our tutors are upperclass students who successfully completed Comm I or a freshmen writing class and are themselves good writers. Students can schedule hour-long appointments with tutors in the Writing Center for assistance with grammar questions, essay drafts, and paper revisions or re-writes.

Interdisciplinary Features. The course is not taught exclusively by members of the College's English Department. Instead, the goal is to encourage participation by non-English faculty in order to emphasize to students that good writing is not restricted to English faculty or courses (cf. Knoblauch and Brannon; Raimes). During Fall 1993, for example, four faculty each teach a section of Communication (approximately 19 students per section), two of whom are not members of the English Department (a member of the History Department and the second author, a psychologist). In Fall 1994, the intention is to have only one full-time member of the Department of English teaching in the course--and in the future, at least on a trial basis, the course may be taught without any traditional staff.

Evaluating Writing. Across their first semester in college, students write four papers that are shared between these two courses. Beyond assigning papers, of course, one must also grade them. Grading--or, in Peter Elbow's view, ranking--is an often thankless, solitary task. Beyond gaining a second opinion, joint grading requires a clarification of course goals: Did the student use the appropriate writing techniques and, if so, how effectively? Did the writer adequately address the topic by demonstrating an understanding of the course material? Both faculty, too, have the opportunity to weigh the merit of the arguments and ideas portrayed and to comment on the overall quality of a given paper.

Faculty in each course strive to read papers "blind"; that is, beyond reading valuative comments made in the margins of papers, they usually remain unaware of a colleague's suggested grade until meeting to make that decision. As a result, a discussion of the assignment's rationale and some negotiation about the final grade often takes place. Students benefit from receiving two sets of written evaluations on one paper--different readers like different things--and they know that their final grade on any exercise was arrived at by agreement or careful deliberation. The grade a student receives on any paper counts in both courses (although it is weighed somewhat differently).

During Fall 1993, we have tried a different approach to joint grading, one that was meant to quicken the return of graded papers to our students and to alleviate faculty scheduling conflicts. Students gave both their Comm I professor and their Macro/

students still receive two sets of written comments on their writing, but more quickly because the papers are read simultaneously by faculty rather than sequentially. Because they can read and grade at their own pace, both faculty also have a bit more flexibility when they set up meetings to discuss the papers.

After receiving a paper grade based on readings by two instructors, students have the opportunity to take advantage of the course's re-writing policy. Revising their work familiarizes students with an important part of the editorial process--an opportunity to integrate readers' suggestions into their writing. Our policy is that students may rewrite a paper once if they are not satisfied with an assigned grade; however, any paper receiving a "D" grade or lower must be revised and resubmitted by the student within a week's time. The same two faculty members who graded the first version of a paper also grade the revision (and provide written comments as appropriate). If the revision is successful, the student receives a higher grade; otherwise, the original grade stands.

Topics and Assignments. The students write one paper in each of six units; the first and last units are somewhat unusual. For the Unit 1 assignment, each student creates a short paper called A Collage of Myself as Writer (as presented in Elbow and Belanoff). This collage is not graded: it simply must be done to complete the course. Our students begin--on the first day of class--to write materials to be used as a quarry from which to create this collage. On this first day, the students write their answers to this prompt: Describe your strengths as a writer and learner (do not mention any weaknesses). Consider the writing you have done throughout your life: of what are you justly proud? As a writer, what do you need? What do you most want to learn in this class? What can you contribute to this workshop course wherein we need to function as a collaborative community? (amplified from a prompt in Elbow and Belanoff, Community 9)

After the students have experimented, under our direction, with such exercises as private freewriting, public freewriting, focused freewriting, invisible writing and letter writing, the students do, indeed, have much material from which to select portions to arrange in a layout that is largely intuitive. For the final copy of the collage, these portions are joined by a string of X's (or something more innovative). We like the non-punitive approach to this opening unit which, we believe, fosters the development of a warm community spirit.

The final unit of Comm I is also not graded by us, but in a different sense. The Macro/Micro class finishes its readings too late in the semester for us to assign a paper based on them. Thus, we work in alliance with the Macro/Micro professors who provide the students with a list of several essay topics for the final examination in Macro/Micro. In our classes, then, the students prewrite their responses in various exploratory ways: they brainstorm, they map out strategies, they write **around** the topic. The students first write a draft for a peer (non-expert) audience then prepare a new version for an expert audience (the Macro/Micro professor). All this more or less follows Chapter 9 of Elbow and Belanoff.

Between the first unit (a collage of Myself as Writer) and the final unit (preparation for the Macro/Micro exam) we assign four papers, but we have varied some assignments. We briefly review four of those assignments here, then include a sample

• Using Elbow and Belanoff's directions in their first chapter, we ask the students to discover or invent (in the Latin sense of inventio) their own topics about the individual in society based on their Macro/Micro readings: Sophocles' Antigone and Aristophanes' Lysistrata.

• The Core students select one of several narratives from Chaucer's Canterbury Tales as the basis for a reader-response paper. In 1990 a student named Alexis addressed how she constructed her own understanding of a Canterbury pilgrim who brought to memory a specific priest in her Catholic high school. Recently Alexis mentioned that she most appreciated the freedom to write about what mattered to her in these linked Core courses.

• Two or three students collaborate to analyze the structure and effectiveness of a passage from an argument in a specific text. Over the years, the texts have included Erasmus' In Praise of Folly and Paraclesis, Luther's Bondage of the Will, Calvin's On the Knowledge of God, Voltaire's Philosophical Dictionary and Letters to the English, Montesquieu's The Persian Letters, and Beaumarchais' The Marriage of Figaro.

• The students had a new assignment this year based on two chapters in Elbow and Belanoff. In this unit--Experience into Words: Description and Narrative--we assigned exercises that encouraged the students to look for then write about a meaningful object, detail, scene or image. Then we canceled a day of classes in order to make our traditional field trip to New York City to visit The Cloisters and the Cathedral of St. John the Divine. In their papers, the students narrated and described one memorable experience in the City.

Additionally, each year we ask the students to address a topic originally defined by the professor of religion who team teaches Macro/Micro. Although the readings in the second unit of Macro/Micro have been somewhat different over the years, they generally concern Judaism and early Christianity. The students are required to describe a situation of suffering in [their] own life and interpret that situation in terms of religious conviction (or, as the case might be, in terms of the absence of religious conviction).

We begin with assignments to help them boldly explore possible material for this personal unit. For limbering up exercises we use the "Perl Guidelines" and "open-ended freewriting." We invite them to write out of their gut and their mind, to get to what Elbow and Belanoff call the felt sense of their truth. That is, we encourage them to write out of more than their conscious mind by using whatever means suits them. They may create their own prompts for any kind of freewriting; they may use any of the devices we have explored together.

In class and out of class, the students experiment by writing in these genres: narration, letter, monologue or dialogue, essay, satire or parody, meditation or prayer, poetry. The students often happily surprise themselves with what they produce. During the classes when the students are experimenting with genres, they work in small groups which elicit non-critical feedback, as Elbow and Belanoff suggest: What was the effect of this genre bit on you? Which one is most memorable? How would you put them together if you were writing this paper?

For the final copy, we encourage the students to blend together several of these

genre, although only one may be the right fit. Then, having finished the full draft, the students produce a descriptive outline for members of their small groups. That is, each student reformats his or her paper with very wide margins on one side--about three inches. Next to each paragraph, the student writes a capsule summary of the paragraph, its purpose in the overall scheme, and how its specific location serves the entire paper. Each student provides copies for all members of the peer group. At this point in the evolution of the peer group, each student may define precisely what kind of feedback he or she wants and needs.

One Student's Writing. Emily, a student in one 1991 Comm I section, asked us to devote more class time to freewriting: She found the method drew out of her whatever she needed for an assignment. For this paper Emily went through all the genre attacks and finally settled on the genre of poetry for her final paper entitled "My Personal Jesus" (reproduced below with her permission):

Father is 53 years old,
12 years older than my
  mother,
36 years older than me.
He is pretty tall
for a chinaman,
about 6 feet,
i would approximate.
He dyes His hair,
although He thinks
I do not know.
(He is embarrassed
  about His age.)
His complexion is a little dark,
from all the work He does
under the sun's rays.
a lot of physical work... .
His hands are horrid and grotesque--
SCALY, DRY, and COARSE:
just glancing at them
  stings.

"if a sapling is left
  unattended,
it would grow slantwards.
that is why people tie
its trunk against a rod.
it is painful at first,
but then it will develop into a beautiful
and straight tree,
not crooked and ugly."

He bore His cross:
He grew up in mainland,
  china
during the political
  revolution.
my grandfather, who
  worked for the former
  government
rapidly experienced the turn from riches
to rags.
there was a lot of turmoil.
grandfather also
  remarried.
Father ran away at age
  13.
He made a living for
  Himself
with minimal schooling.
He was never a little boy,
but always a man.

[Refrain]

I felt he did not like me
from the moment i was
  born.
my family made jokes
on how disappointed
He was when He discovered that
i am a girl, not a boy.
but i knew it was true.
by society and tradition,
chinese prefer sons,

not daughters.
there is this saying in my language,
Phonetically pronounced
"seet bun fo":
girls are good for
nothing.
these syllables ring in my mind from time
to time.

[Refrain]

He did favor eric over
me,
but they were trivial things, i guess.
he did not want to come to my grammar
school
graduation
and complained.
He did not complain
when my brother
graduated.
He turned my bliss
for being valedictorian
into despair:
girls are good for nothing.

[Refrain]

one day I asked Him for a ride to school
because I
had to run a meeting.
He accused me of
intentionally giving Him
trouble,
that i treated Him like a
servant.
i was devastated.
i just wanted Him to
be proud of me,
that i played a big role at
school.

[Refrain]

one evening,
He grew furious
that eric proved Him
irrational.
He yelled at my mom.
He wanted so
desperately for her
to see things His way...
that we were
the worst children
parents could possibly
have.
i cried.

[Refrain]

i feel very uncomfortable
around Him.
usually, there is a connection with whom
I am speaking with
and listening to.
i look into his/her
eyes
to show that
i am really there,
actively taking part.
but I cannot look into
His face, His eyes.

[Refrain]

when at home,
He always reads the chinese newspaper
on the living room couch.
the encyclopedia shelves are near this
couch.
when i need a volume
for some assignment,
i will wait the two hours
until He leaves.
only then will i go into
the room to
acquire the book.

[Refrain]

we hardly speak to each other but
if He had something

to say,
it was always negative.
He always criticized me.
nothing I did was ever
good enough.
each word uttered was
a thorn in my side.

[Refrain]

He despised my
college career and
selections.
i had to go to a
renowned institution like
UCLA
and choose a profession
that made money,
like a doctor.
He looked down on
on moravian and
my desire to become a
teacher.
my choices were
unworthy.
He started telling people
that i was going to yale,
when i hadn't applied yet.
i never did.

[Refrain]

He used to beat us.
and beat me more
if i cried.
i was to be strong,
to accept and withstand
punishment.
i realize i perceive him as the disciplinarian,
not as my father.
if fear Him,
the way i fear God.

"if a sapling is left
unattended,
it would grow slantwards.
that is why people tie
its trunk against a rod
it is painful at first,
but then it will develop into a beautiful
and straight tree,
not crooked and ugly,"
He said that afternoon.

Emily's poem was published in the college's literary journal the following spring. As Emily herself clearly told us, she was writing to learn.

Summary. It seems to us that in designing and executing Comm I, we have achieved at least three important goals of the Interdisciplinary Core curriculum. First, because of the linkage with the Macro/Micro course and the multi-departmental makeup of the teaching staff, we have a truly interdisciplinary writing course, one where writing is taught and practiced not in curricular or departmental isolation but in a meaningful connection with the larger world of liberal learning. Second, we have given a significant boost to writing-across-the-curriculum at Moravian College. The linkage of Comm I and Macro/Micro shows students and faculty alike that writing matters in courses and to teachers outside the English Department. Third, the workshop approach and the process orientation of our course provide students with problem-solving strategies for their own writing that they can take with them to all subsequent courses in the Core Curriculum.

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Initiating Change in College Classrooms Through Stories and Collaborative Discourse

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This paper is about collaboration among college teachers and envisioning a better way to teach and a better way for students to learn. This paper is not a report on the culmination of our experiences but a reflection on our travels to date. We will discuss collaboration as a process—a particular process that we continue to engage in as we struggle with our understanding of teaching and learning and as we try to incorporate a collaborative model into our college classrooms.

Teaching

Most of us have developed a clear-cut definition of what it is to teach, because most of us have had many experiences with learning and with teaching. Our autobiographies inform our identities as teachers and guide the decisions we make regarding instruction. Our prior experiences with schooling help to develop our schema well before we become teachers. Thus, college teaching is often grounded in the traditional schemata of lecturer or "teller" of information.

College Teaching

College teachers bring a well-developed knowledge base to their subject. And as members of what Bruffee (1984) calls *the community of the liberally educated public at large*, college teachers seek to cultivate reflective and liberating thought with its cognitive, socio-cultural, and humanistic dimensions. Yet, we need more than a knowledge base and liberating aspirations to become effective teachers. The need to question what students are learning and how they are developing their understanding of our subjects is an important aspect of teaching. Before disillusionment sets in, the college teacher should question his/her role as a teacher and his/her purposes for teaching. This reflection and questioning must be grounded, in part, in learning theory. Teaching can turn into a lonely, unrewarding, teacher-versus-student stand off until we question *how* we are teaching, *how* we present ourselves as teacher, *what* we want our students to learn, and *how* we evaluate students' growth and learning.

The Role of College Teachers in Teacher Education

Those of us who are involved in the education of teachers have a multidimensional task that involves (a) preparing students to teach children, (b) helping students establish a sound knowledge base, and (c) helping to empower them to make changes in the traditional teaching and learning process. Our students need to be critical thinkers and active decision makers in their professional and private lives. And as teachers, they need to work within a theoretical framework and apply a well-developed knowledge base. Working within these dimensions gives us reason to question and to reflect on the worth of instructional decisions and learning approaches that we present in the college classroom. We need to teach teacher education students in ways that will enable them not only to develop teaching repertoires framed within a sound knowl-

edge base but also to become knowledge generators and change agents.

The Role of Dialogue and Collaboration in Learning and in Rethinking How Learning Occurs in College Classrooms

Recognizing that knowledge is socially constructed by each individual within the boundaries of his/her own experiences, prior beliefs, and attitudes, we began our dialogues about the learning experiences we had planned for our classes, how these experiences shaped our students' awareness, and the direction we should pursue for further learning. From our dialogues, we learned that we needed to rethink how learning occurs.

We discussed the Vygotskian (Wertsch, 1985) framework of learning through interaction, negotiation, and collaboration to better understand how our students process their experiences, develop an understanding of their beliefs and attitudes as teachers, and construct a knowledge base. Vygotsky informs us that we learn as we engage in direct social exchange with other people. Through imagination and reflective thought, we internalize our public or social conversations. Through writing, another form of displaced conversation, we formalize our inner speech and make our internalized conversations public and social again (Bruffee, 1984; Tarule, 1992).

Extending Vygotsky's account of learning, Bruffee (1984) concludes that if we want to understand and cultivate reflective and liberating thought in higher education, then we must "understand and cultivate the kinds of community life that establish and maintain conversation that is the origin of that kind of thought (p. 640)." For Bruffee, to learn is synonymous with working collaboratively to establish, maintain, and, in the long run, generate knowledge among a community of knowledgeable peers. In the process of working collaboratively, communities of knowledgeable peers socially justify their beliefs. At the heart of such collaboration is not warm, fuzzy relating, but a sense of connection to others and respect for individual efforts as moments of equal inner subjectivity (Bleich, 1993). ***Therefore, we are seeking to better understand the nature of such collaboration and its multiple layers of discourse in order to envision better ways to teach and better ways for students to learn.***

Collaboration requires certain conditions for it to be effectively enacted. To collaborate, we must trust one another with our thoughts, beliefs, and teaching styles and recognize that tensions and misunderstandings inevitably will occur. Once trust has been established, collaboration involves pursuing the generation and justification of knowledge by (a) valuing our biographical differences, (b) focusing on practice-based concerns in our courses, (c) listening to one another's voices, (d) reflecting on each other's views, (e) dialoguing about those views, (f) expressing our concerns and building ideas with others, (g) challenging each other's biases and presuppositions, (h) negotiating new avenues of inquiry, and (i) seeking out and dialoguing with more experienced or larger communities of knowledgeable peers. As we actively participate in these processes, we disclose our understandings of our particular institutional setting, our teaching selves, and the integration of our beliefs and autobiographies into these selves. These disclosures, which involve us in various layers of discourse and take place over time, not only help us to locate our voices but also become sites for change (Bleich, 1993).

Overview of Our Courses

A. Jere's Course

At Geneseo, I have come to use within my courses an ethnographic approach to foster active learning and to develop a critical perspective by which students view, analyze and come to know the culture of the elementary school classroom. This approach provides a framework for the construction of understanding related to the dynamic nature of the classroom and the attendant complexity of learning processes. As future teachers, students begin to reflect on the complexity of teaching, learning, and knowing, to personally experience construction of knowledge, and to become intimately associated with the psychosocial milieu where negotiation results in consensually agreed upon knowledge. They, in essence, begin to view teaching, learning, and knowing from a strong theoretical and experiential framework, allowing them to approach their chosen profession as critical, reflective, and proactive teachers.

The course, "Approaches to Teaching Science and Mathematics," emphasizes constructivist learning and reflection in and on action. Focusing on the question "How do children make sense of mathematics and science?," three visits to an elementary school take on particular importance. On these visits, each college student interacts and teaches a series of mathematics/science lessons to two children. As a result of my growing interest in the power of stories as a vehicle for learning, I asked my students this year to write a story rather than a report of their experiences. Using these experiences, the students constructed an understanding of learner development and a vision of teaching and learning science and mathematics. The students then informally shared their stories.

B. Mary's Course

My early childhood undergraduate curriculum course includes a practicum experience of seven half-day visits to a preschool classroom. I recently became interested in using story writing to help students process their field experiences in a more cohesive and reflective way. This interest began with students writing stories about their practicum experiences, but evolved to include peer dialogue and thematic story review.

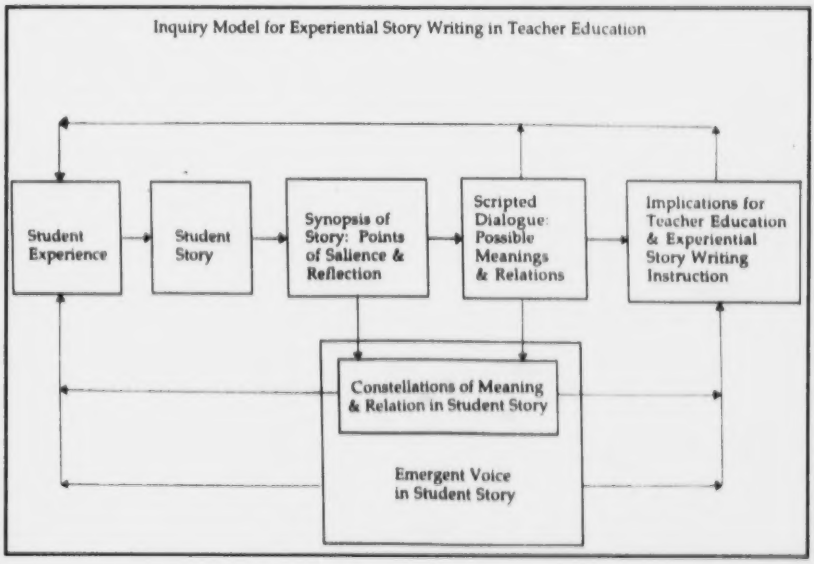
My initial aim was to explore the power of story writing as a tool for reflecting on practicum experiences. Based on their journal entries of interactions with children, the students drafted a story about a significant teaching and learning episode. In small groups, they shared their story drafts and sought advice about what might be unclear and what others found interesting in the story. As the instructor, I moved among these groups either listening and joining in on the dialogue or trying to facilitate discussion. I encouraged the participants to elicit new information that might yield a more plausible or compelling story or to suggest new perspectives that might lead to revision of parts of the story. The students then wrote the final versions of their stories. After the seven visits, each student chose three peer stories that were most germane to personal growth experienced during the practicum and wrote a thematic review relating these stories to personal growth as well as to professional literature in early childhood education.

As a result of this experience with story writing, I have gained a deeper interest in

how literary and psychological theory—particularly the work of Bakhtin (1981; Holquist, 1990) and Bruner (1986) on narrative and dialogue—might inform the continuing development of my course. Thus, another reason I now see for use of story writing and reflection, which Bakhtin and Bruner articulate so powerfully, is to help teacher education students to locate and negogiate their voices with other voices in a classroom situation so that they become empowered to build teaching and learning communities.

Convergence of Our Collaborative Interest in Students' Stories

Our collaboration began in conversations—conversations about the place of narrative as a way of knowing. Both of us were incorporating stories into our courses, so this became a concrete focus of our conversations. By the end of the semester, we extended our focus from use of stories to help students organize understandings of field experiences to listening for students' voices in their stories. We also began to discuss collaboration as a vehicle for reenvisioning and changing our teaching and college courses. From these experiences, readings, and conversations, we developed a framework for collaborative inquiry that would incorporate stories from our courses as windows into specific classroom cultures and the location of student voice within those cultures. (See Figure 1.)


Inquiry Model for Experiential Story Writing in Teacher Education
Student Experience
Student Story
Synopsis of Story: Points of Salience & Reflection
Scripted Dialogue: Possible Meanings & Relations
Implications for Teacher Education & Experiential Story Writing Instruction
Constellations of Meaning & Relation in Student Story
Emergent Voice in Student Story

Description of Our Collaboration: Dialoguing about and Reflecting on Students' Stories of Practicum Experiences

To pursue our inquiry, we chose two representative student stories and began a dialogue about those stories. We decided to focus our dialogue on just two stories, because we wanted to deeply explore various layers of discourse in order to better understand the possible meanings and relations within those stories. Our next deci-

sion was to sculpt a synopsis of each story so that points appearing to be salient or powerful to the student and points at which the student reflected on experiences were highlighted while other parts of the story were glossed. As collaborators, we then exchanged our interpretations and questions about the abridged stories. Finally, we summarized what appeared to be the constellations of meaning and relation that gave direction to each story.

Later, we individually spoke to the student authors probing further their meanings at various points and why they had responded as they did. Then, as collaborators, we revisited our scripted dialogue and asked each other why we had responded as we did at salient points. In this paper, we sample from our final dialogue to show how we moved through and experienced multiple layers of discourse. But first, we will briefly describe the two stories we chose for our inquiry.

Sue's and Catherine's Stories

Sue's story focused on two African American fourth graders, Walter and William, from an urban school and her attempts to teach science and math lessons. Her story reveals how over time she began to locate her voice and imagine new possibilities for teaching and learning. Catherine's story focused on an urban preschool child, Katie, who appears to need extra love and attention. In her story, Catherine reveals how she developed her awareness of the need for teachers to move away from an exclusive focus on one-on-one relationships to a broader focus that includes dialogue with other voices in a classroom situation.

Revisiting a Dialogue Episode: Reflecting on Possible Constellations of Meaning and Relation

Now we will turn to a brief revisiting of portions of the stories and our dialogue in which we explore possible meanings and relations in the stories.

A. Sue's Story

"*Getting off the school bus, I got a nervous feeling in my stomach. I was about to teach in my first city school, probably the worst school in the city. I don't know why I was so nervous. After all, kids are kids. However, these kids were different from others. Although they enjoyed the same activities as other kids their age, many lacked a stable home environment.*"

MJ: Jere, on the first page of Sue's story I am interested in knowing more about why you responded with: "Her experience continues within a framework of tension, generated perhaps by a fear of the unknown. Her perspective is of one who does not know rather than one who has knowledge. Or, is it just a simple situation of going into the new and unknown?" Can you tell me more about what you were thinking?

JH: Because I think a great deal about what it means to *prepare* a young teacher, I would like students not to be frightened of the unknown but face the situation as a solvable challenge.

Sue greets and leads two boys to a table. The boys, Walter and William, begin to fool around. Walter proves to be a problem as he slaps William on the back of the head. . . . While playing a game of concentration, William wins and Walter gets angry and steals all of his cards. Walter's not agreeing to a change in the rules, results in

Sue reverting to the original rules. She states, "I did not want Walter to feel bad, so I let them play again the regular way.

JH: What is the nature of the lesson plan, and why did you direct your attention to it when you responded, "What caused Sue to attempt the change of rules of the game and to increase the difficulty of the game? Was it her lesson plan?"

MJ: It seems to me that Sue was not bringing her understanding of the social interaction into her implementation of the lesson. She seemed to be operating on two tracks: one for the interactions with the boys and the other for the lesson.

B. Catherine's Story

Later that morning, a conflict between Katie and Catherine emerges. While Catherine is working on puzzles with other children, Katie comes up from behind and grabs her around the neck. Grinning, she will not let go. Finally, Catherine breaks her grip. In response to this physical aggression, Catherine says, "I explained to Katie that when she does that it hurts me and that she needs to use her words to tell me what she needs. As soon as Katie heard 'use your words,' she proceeded to cover her ears and say, 'I can't hear you. . . I can't hear you.'"

Despite Catherine's requests to put down her hands so they can talk, Katie keeps repeating, "I can't hear you" over and over. Baffled, Catherine decides to ignore her and to move on to another activity.

JH: Mary, the "I can't hear you" response was such a strong segment of the story. I wondered what you meant when you said, "Does Katie's repeated 'I can't hear you' response to Catherine's instruction 'to use your words' signify resistance to a perceived admonishment or this novice's attempt at control?" To me, this signified an isolated child.

MJ: Well, after talking with Catherine last week, I realized that I need to be cautious about my interpretation of the text. There may have been an element of playfulness in this exchange from Katie's perspective that neither Catherine nor I initially had acknowledged.

Nevertheless this behavior pattern continues during circle time. When Katie sits on Catherine's lap, Catherine tells her that she doesn't like what happened earlier when Katie covered her ears. Despite the serious tone of Catherine's voice, Katie smiles and, when questioned, nods in agreement. Later, when the breakfast food arrives, Catherine gently tries to get up to help set up for breakfast, but Katie will not budge.

MJ: At one point in our dialogue, you say, "The message to Katie is not very clear. What does the child hear when Catherine uses 'a serious tone of voice?' Katie's personal agenda is a strong motivational force. She seems to know exactly what she wants and is driven to obtain it." Why did you respond in this way to this episode?

JH: It made me think how strongly our personal agendas influence our actions. "Serious voice" may not register in this context, depending on Katie's personal agenda. We need to hear more of Katie's voice if we are to interpret her behavior and facilitate her learning.

What We Have Learned So Far From Our Collaborative Inquiry on Students' Stories

Reflecting back on our dialogue about possible meanings and relations in these

student stories, we recognize that, in the process, our understandings of voice, collaboration, and community have grown. Some of the understandings that have emerged are:

· Collaboration involves engaging multiple layers of discourse in the process of learning and coming to know.

· Teaching and learning experiences as collaboration involve location of one's voice and relationality with other voices.

· Collaboration is a situated experience in which we become more aware of each other's assumptions, beliefs, and histories.

· Sharing our assumptions and histories helps us to frame and justify our beliefs about what matters most in our teaching and learning experiences and is transformational in that we now can act on them more consciously.

· As we move from conversations toward collaborative writing, we help each other to focus our thinking and to avoid getting off on tangents.

· Writing moves our conversations toward internalization of ideas and then external formalization of our perspectives.

· Collaboration involves generating knowledge in a community in which you feel a sense of belonging.

How Our Collaboration Informs Our Own Pedagogy and Our Efforts to Initiate Change in Our Classroom Communities

Our collaborative inquiry also suggests to us needed changes in our courses. For the present, we have identified the following possible directions for further inquiry:

· We need to frame our courses within a social, linguistic, and psychological framework.

· We should encourage students to examine the interface between their preconceived notions of what matters in teaching and their initial practicum experiences.

· We need to facilitate each student's continual construction of a vision of teaching and learning.

· We should make fuller use of stories of classroom experiences to facilitate student discourse about classroom dynamics, location of voice, and relationships with other voices.

· We should foster greater awareness of possibilities for teaching and learning in specific classroom situations.

· We need to help students to reflectively explore formation of learning communities in various classroom situations.

· We need to structure our classes so that students gradually move toward more authentic collaboration through dialogue, reflection, and writing.

· We must help to establish and cultivate the kinds of community life in college classrooms that will support the generation of knowledge within the context of building and rebuilding communities.

What we have learned from examining students' stories of practicum experiences and listening to their voices provides us with direction for needed revisions in our stance toward teacher education. Teacher education needs to focus on the complex dynamics of the culture of teaching and learning embedded in every classroom and

the nature of community life that supports learning. As Bruner (1986) says, "Most learning in most settings is a communal activity, a sharing of the culture. It is not just that the child [or the teacher education student] must make his knowledge his own, but that he must make it his own in a community of those who share his sense of belonging to a culture." (p. 27)

Endnotes

The authors wish to thank Sally Lipa-Wade for her contributions to our collaborative conversations and to earlier drafts of this paper.

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SCIENTIFIC LITERACY AND QUANTITATIVE THINKING

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Several years ago I found myself teaching remedial mathematics and Core Physics. Remedial math is that blight on the college scene, under which college professors are called upon to teach undergraduates the math that they should have learned in high school (or middle school or elementary school). Core Physics is part of Brooklyn College's set of low level science courses for non-science majors. In my remedial math class, we were rapidly plowing through the usual ninth- and tenth-grade elements of algebra and geometry -- operations with polynomials, simultaneous equations, quadratic equations, graphs, etc. Students found it hard going, but some learned. Those who succeeded would move on to the Core sciences and other credit-bearing college-level courses. In my Core Physics class, at the same time, I was trying to convey the idea that one quantity could be proportional to the square of another quantity (e.g. the distance a body falls is proportional to the square of the time), but this was a completely foreign concept to my students -- students who had either passed remedial math, or who had passed those high school courses that allowed them to place out of remedial math.

Something bizarre was happening. Students were pressed into complex algebraic manipulation, but did not grasp the basic meaning of simple algebraic expressions. Inverse proportions, even direct proportions, were not part of their repertoire, not to speak of logarithmic or exponential relations. Our students' inadequacies in math are, of course, nothing new. We in the science departments have suffered with this for many years, and numerous studies have documented the poor performance of American students relative to their counterparts in Japan and elsewhere.[1] But we haven't approached the question ab initio. Why are we doing all this mathematics anyway? Is it just inertia? "That's the way it's always been." Is it sadism? "I had to get through algebra, and so will you." Doubtless our budding scientists and engineers need a good grounding in math, but they are a small minority. What about math for everybody?

"Everybody Counts" is the title of a recent book, "A Report to the Nation on the Future of Mathematics Education", sponsored by the Mathematical Science Education Board,[2] a great pun, and a triumph of public relations over logic. The book presses upon us the reasons for studying math: We need an appreciation for the size of things: $300 billion for defense, so many trillion for the national debt. Well and good, for the elementary school level. We need statistics: We must become informed consumers of public opinion polls, medical research, advertising claims, etc. Indeed, probability and statistics are working their way into the secondary school curriculum, but they have not replaced the standard algebra and geometry, which still occupy so much of our time. Moreover, no one knows whether statistics in high school will indeed lead to a competent and responsible adult citizen a decade later. By the time we find out, the new subject will be an entrenched part of the curriculum, and there will be no getting rid of it, whether we find it to be a waste or not. To an unnamed person who

says, "There's no algebra in my future," here is the answer: "Just because students do not do algebra anywhere except algebra class does not mean they will not use mathematics in the future. Over 75 percent of all jobs require proficiency in simple algebra and geometry, either as a prerequisite to a training program or as part of a licensure examination."[1] The unnamed writer of that response does not ask whether the prerequisite might be inappropriate.

The fact is that the mathematics establishment has been running on automatic for a long time. And as we move toward new curriculum developments in the field,[4] it seems clear that the last group to be entrusted with devising new mathematics programs should be that very establishment, given (1) its deep vested interest in the outcome, and (2) its poor track record. Witness the failure of the last generation's "new math", or the post-Sputnik "Secondary School Mathematics Curriculum Improvement Study".

We in science education would like our entering students to be capable of quantitative thinking. For science majors this goes without saying, and those who lack this capability quickly drop out of the science pipeline. But there is also the matter of science literacy, teaching science to non-science majors, typically a part of college distribution requirements, and often a major part of our teaching responsibility. Most of us believe in science literacy because we view science as an integral part of western culture. But the broader academic community may not be aware of the changes that have occurred in this area of the curriculum over the last several decades.

There was a time when many colleges and universities required all graduates to take, perhaps, two or three semesters of science, the same introductory science courses taken by majors. I well remember, as an undergraduate, disapproving of this system, seeing that most students took biology, a few chemistry or astronomy, but none took physics. There was also reason to think that a terminal course might have different goals than a course that was essentially a gateway to more advanced and broader learning.

I wasn't the only one uncomforable with the existing approach to science literacy, and the 1960s saw the emergence of new departures. Robert March's book, Physics for Poets, was one of the influential new texts.[5] The student-poet or student-humanist was supposed to be interested in deeper subjects than the time it takes a ball to fall to the ground, or the result of mixing copper ions with sulfuric acid. So, while the new books and courses paid some attention to everyday science, they quickly moved on to the hot plasma at the center of the sun, to the black hole at the center of the galaxy, to Heisenberg's uncertainty, and to the mysterious electron cloud surrounding an atomic nucleus.

For teachers and students alike, this was heady stuff. We always regretted not being able to get to modern science in our introductory classes. But the new trend brought us dangerously close to received wisdom, to knowledge based on the professor/text as authority, the student as note-taker. We blurred the distinction between the natural sciences and other disciplines that are less securely tied to observation, to the strict verifiability imposed by nature. As scientist/teachers, we had always taken pride in the fact that our students learned by experience, by measuring things in the laboratory, or at least by observing experiments that we could show them in front of the lecture room, and also by using the equations of science to solve problems them-

selves. It was empowerment: The student with Newton's laws at her command possessed the power of Isaac Newton; she could find the answer herself.

Alfred North Whitehead said that if learning is not active, knowledge becomes inert. The new trend in science-for-non-scientists was popular: Students knew the exciting new words, but they could not do anything other than repeat them. Words became part of their passive vocabulary, and meanings were quickly lost. Furthermore, the new curriculum became largely non-quantitative. The exotic domains of modern science demand more sophisticated mathematics than that owned by the undergraduate, and professors soon became frustrated by the diminishing capabilities of arriving students. Lecture room and exam paper became filled with verbiage, and the lone student grappling with a mathematical problem was no more.

Whitehead's principle was not everywhere lost, and the concept of the active student, constructing her own knowledge out of materials and curiosity, became a new movement in science education at the elementary school level.[6] In the constructivist approach, the student is encouraged, with guidance, to build scientific knowledge for herself, and so to derive confidence not only in this knowledge, but in her own analytical powers. These ideas have been widely successful at the elementary level, and attempts to extend them to other levels of education, notably teacher training, have been made.

But constructivist learning has two important limitations: (1) It is very difficult, at least given the abilities of today's students, to expect the student to construct quantitative relationships, and (2) it is difficult to go beyond the realm of ordinary laboratory/schoolroom parameters. Lengths are limited to centimeters and meters, time to minutes, hours, or weeks; experiments are limited by considerations of safety and cost.

The laboratory is limited, but the imagination is not, and as teachers we want to unlock the imagination. We do want students to see that nature is wierd and wonderful, as they would say, "unbelievable", yet that the imagination is controlled by the internal logic of the universe, and that it is our privilege to uncover that logic.

The key here is mathematics. If students learn how to look at functional relationships among variables, to see them numerically, algebraically, graphically, logarithmically, if they develop confidence by constructing quantitative relationships themselves, then they may have the confidence to use such relationships to boldly go where they have not gone before, to the interior of the sun, to the interior of the atom. Mathematics is the step that must follow constructivism.

A brief example from my experience teaching astronomy: In a course for non-scientists, we discussed stellar evolution. We wanted students to see that the density of a white dwarf star, about 10^5 grams/cubic centimeter, was something bizarre and exciting -- "unbelievable". We made analogies, "the grape that weighed 1000 pounds", but the principle would not stick, because the density concept was not part of the students' active vocabulary. To make it so, students must be led through a whole series of experiments, finding the mass:volume ratio for different pieces of a given material, then for other materials (say, brass, aluminum, water, alcohol). They must learn to view this data graphically. They must learn to use the relationship, density = mass/volume, in a series of computations on objects from a worm, to a human, to an airplane, to the earth. And this study must be preceded by a similar, hands-on, approach to volume and to mass. Only then may students appreciate a table such as the

following:

	density (g/cm^3)
earth	5.5
Venus	5.2
Jupiter	1.3
Pluto	0.5 - 0.8
sun	1.4
white dwarf	10^5
pulsar	10^{15}

It is possible for the student to imagine these things, the pulsar, the black hole, the cluster of galaxies, but only if she has mathematics at her command. Mathematics must be the handmaiden of the imagination.

Now the mathematical work in this example may seem to be below college level, indeed, below high school level. But the fact is that these are the things that college students do not know. Research shows that students begin to lose their grip on mathematics at a surprisingly early stage, at the level of ratio and proportion, at the point where they jump from integers to numbers on a continuum, at the point where they should begin to think proportionally.[7] Then, as they move into middle school and high school, mathematics becomes more and more formal and abstract. The operations that they have to learn become formal operations for which they must memorize rules. The variable "x" on the page of a textbook is a symbol, not a time which the student has recorded from a clock, or a mass that she has weighed on a scale.

Mathematicians have confused the need to make their subject concrete, with the need to make it relevant. "How many cookies must I sell to make a profit ...?" "What should I charge for a mixture of peanuts and walnuts if ...?" Here is the cover of a new high school algebra text (developed recently by a formidable team of mathematicians, with a formidable quantity of U.S. government money), showing four baseballs along a trajectory, with a small graph of the parabolic path.[8] Students will not be fooled into thinking that they will really be using mathematics to deal with baseball, or peanuts.

Mathematics is truly the language of science, and it is surely desirable to teach science, even to non-science majors, with a significant and consistent quantitative component. The following is a partial and preliminary list of some of the kinds of mathematics one would want in order to do this job well. Bear in mind that all or most of these subjects will be found somewhere in the primary or secondary curriculum. The problem is that students emerge without having learned them, largely because the subjects are not taught with reference to real quantities that students can see and feel. Students are, furthermore, swamped by a superabundance of other, more complex, mathematical material that is excessively formal, useless in their view, and in fact not a part of their future. At certain points in the following list, indented, I have contrasted the usual or standard approach to the subject with the more concrete approach which I would support.

I. Functions

One variable, y, depends on another variable, x.

A function is a formal relation between elements of two sets.

Single-valued-ness is important.

The domain and range are important.

1/x is not defined when x = 0.

A. The simplest function is $y = ax$, a = constant. But a constant sometimes takes on different values.

Examples:

circumference = δ X diameter

mass = density X volume

distance = velocity X time

heat = constant X temperature change

Formulations:

$y = ax$

$y_2/y_1 = x_2/x_1$

$y_2/x_2 = y_1/x_1$

straight line graph through origin

If y is proportional to x and y is proportional to z, then y is proportional to xz.

For small changes, (almost) all functions are linear.

B. Other functions

$y = y_0 + ax$

$y = ax^2$

Examples:

area = $(\delta/4)(\text{diameter})^2$

distance = $(1/2)(\text{acceleration})(\text{time})^2$

$(y_2/y_1) = (x_2/x_1)^2$

graph of y vs. x, parabola

graph of y vs. x^2, straight line

Exercises like: Simplify $3x^2y^3 - 5x^2(x^4 - 2y^3)$.

$y = a/x$

Example:

acceleration = constant/mass

$y_2/y_1 = x_1/x_2$

$y = a/x^2$

intensity of sound/light
force of gravity
force of electrostatics
connection to the structure of three-dimensional space

logarithms
connection to vision and hearing

use of logarithms for doing arithmetic

$y = x$

63 approximately equal to 8

$63 = 3\ 7$, emphasis on simplifying square roots

C. Determining functional relations via
common sense
experiment
hypothesis

II. Arithmetic with Uncertainty

statistics associated with measurement errors
significant figures
graphs of measured data, scatter around a straight line

Almost all graphs are done with integers.

III. The number line is a means of teaching the decimal system, showing the positions of numbers from meters, to centimeters, to tenths of a millimeter.

The number line is a means of teaching the formal nature of rational and irrational numbers.

IV. Angles

The ratio of arclength to radius is a constant. This is the defining characteristic of angle, and is discovered by students with measurements on paper. This ratio, furthermore, is proportional to the angle in degrees.

latitude and longitude
distance measurements along the earth
size of the moon and the sun

parallax and the distance to stars
angular size and the visual system

An angle is a set of points with certain characteristics.

Finally, let me describe briefly a course I have developed and taught at Brooklyn College to a group of elementary education majors, and thus illustrate some of the interplay between science and mathematics teaching that I have been discussing. This course is part of a new science sequence designed for education students. It is mandated to be inter-disciplinary (physics and geology in this case), and is taught in a laboratory setting. As far as possible students are not told things, but discover them through experiments, mathematics (although very few are good or happy math students), and modeling. The geology became seismology, the study of waves transmitted through the earth, and how they are used to learn about the earth's interior. The physics became certain areas of the subject that provide a necessary background to discussion of the earth's interior -- mass and density, buoyancy, heat and temperature, velocity, wave motion.

As a preliminary concept to density, we discussed volume. We counted the number of one-centimeter cubes that fit into rectangular plastic boxes, to illustrate the definition of volume, and to determine the formula for the volume of the box. We determined the volume of a sphere, by filling a number of rubber balls with water. The important point here is not to verify a formula for the volume, but to discover the proportionality between the volume and the cube of diameter. V is plotted against D, and also against D^3. Prior to this, we have looked at a number of direct proportions, and also determined, similarly, the area of a circle.

We established, by measurements on paper, the basic characteristics of angles, including the proportionality between the arclength of an angle and the radius. Students could then carry out their own computation, using given data, to find the earth's radius, via the method of Erastosthenes (c. 200 B.C.).

Students conducted a thorough series of experiments on buoyancy (weighing various objects suspended in air and immersed in various liquids). We assembled data from the entire class, and asked students to deduce the law for the buoyant force [B = (volume of object) X (density of liquid)]. Only a few students in each class could figure this out, even though the answer, one might have thought, was staring them in the face. It is the kind of thinking that young people should be accustomed to gradually, through the school years from fifth or sixth grade on up.

Heating water with a bunsen burner, students discovered the proportionality between quantity of heat (as measured by time) and the increase in temperature. Furthermore, they learned that the heat needed for a given temperature increase is proportional to the mass of water, and that the heat needed for another substance (copper shot) is much less than that for water. These were the first examples of straight line graphs that did not go through the origin. There were also a number of experiments on melting and boiling.

Finally, students were asked to design their own experiment to learn something

about the process of cooling. They came up with very interesting results. One group compared the rate of cooling of a beaker of hot water surrounded by ice to that for a beaker surrounded by room air. Properly controlling variables, they observed a substantial difference in the rates, and even discovered that the temperature graph was not a straight line, but curved to approach the environmental temperature asymptotically.

We prepared for the study of seismic waves by using laboratory types of waves as analogs. A long slinky, stretched out on the floor, demonstrated both transverse and longitudinal waves, and we were able to measure the velocity of these waves quite accurately with an electronic stopclock. A ripple tank shows waves in two dimensions, circular wave fronts from a point disturbance as well as straight line wave fronts from a linear disturbance. A pulse, generated by just dipping one's fingertip into the water, is an accurate model of seismic waves caused by slippage near the earth's surface. Continuous waves can also be generated, in order to observe over a longer time period. One can thus explain the difficult relation between wave fronts and rays, and demonstrate reflection and refraction, which are the key to the motions of seismic waves. (Experiments on reflection and refraction of light supplement this part of the course.)

To begin the study of the earth's interior, students can now carry out a simplified version of the Mohorovicic analysis, which led to the discovery of the boundary between the earth's crust and the mantle. Here they calculate the arrival times for a wave that travels just below the surface, and for a wave that is refracted at the boundary, travels in the mantle, and is then refracted back up toward the surface. Essential in this work, as in all the modeling of seismic waves, is that students do all these calculations themselves. Although they frequently have questions as they proceed, they discover questions themselves, and must figure out what to ask.

We use polar coordinate graph paper, a large circle representing the earth's surface. Students draw rays that are refracted at the mantle-core boundary, and discover how a "shadow zone" (a place where no seismic waves are directly received) occurs on the far side of the earth. They investigate different types of signals, such as rays reflected one or more times from the surface or from the mantle-core boundary. They compute the time of arrival for such rays, by measuring distances on the graph paper, converting to kilometers, and using known velocities to find the time. They see the interplay between experiment and theory, as times are used to calculate velocities, and velocities are then used to predict times. They model the discovery of the boundary between the inner core and the outer core, by constructing a ray refracted through the inner core.

Again, the mathematics here is not "college level" math, or even advanced high school math. My conscience is relieved by the fact that, at least in the latter part of the course, students are brought rather deeply into a fairly sophisticated and modern science, and learn in an active, participatory manner. Moreover, the mathematics in the course, a variety of simple algebraic calculations and graphical procedures, is used repeatedly and essentially, in the students' effort to find the answers to questions raised by their own experimenting and modeling.

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INNOVATIVE APPROACHES IN TEACHING INTRODUCTORY GEOLOGY TO URBAN STUDENTS IN THE NEW YORK METROPOLITAN AREA

HOWARD R. FELDMAN

TOURO COLLEGE

Touro College is a privately endowed independent institution of higher learning and professional education that opened in 1971 and grew rapidly for the next 23 years. From its beginning class of 35 male liberal arts and science students, the College added a Women's Division (to the College of Liberal Arts and Sciences), and the schools of General Studies, Health Sciences (The Barry Z. Levine School of Health Science), Law (The Jacob D. Fuchsberg Law Center), and Graduate Jewish Studies. Approximately 8,000 students are now enrolled in Touro's five major divisions.

According to the Touro Catalogue, The School of General Studies seeks to provide a caring educational experience of high quality to serious students in neighborhoods and communities that have been traditionally underserved. By locating in inner-city areas, Touro provides accessible educational facilities, libraries, learning laboratories and other resources. In general, classes at Touro are small and are taught by many of the same faculty members who teach at the College of Liberal Arts and Sciences (the main campus of which is on west 23rd street in Manhattan). Faculty members, as a rule, have the special sensitivity to work with students who may need additional support.

The student body of the School of General Studies is a reflection of the social diversity found among residents of urban centers (e.g. economic, ethnic, racial). Students range in age from 17 to 70 and the majority are women who are heads of households and are preparing to enter or re-enter the job market.

THE COURSE

Seven years ago I proposed a new course entitled "Adventures in Earth History" to be taught at the School of General Studies. The course was intended for students with little or no science background and could be used to satisfy a science elective for non-science majors. The syllabus includes independent units that survey topics and principles in physical geology such as: minerals, rocks, dynamic earth processes (volcanism, earthquakes, landslides), and deformation of the earth's crust (folds, faults). Included also are topics related to historical geology: geologic time, the fossil record and reconstruction of paleocommunities.

Students delve into selected topics in earth science chosen because of their impact on current scientific thought and research or general interest and relevance to man. Examples of such concepts are: plate tectonics, "scientific" creationism, and the causes of mass extinctions. Advanced students interested in paleobiological problems are able to use the collections and facilities at the American Museum of Natural History, including the scanning electron microscope, on a limited basis to conduct research for reports or projects.

OBJECTIVES

Upon completion of the course the students will have gained: 1. knowledge of man's environment, the biosphere, and the make-up of the planet earth and, 2. competency in interpreting their surroundings, specifically, topographical features such as mountains, valleys, slopes, hills, rivers, as well as recognizing features such as the origin and significance of building stones in the metropolitan area.

It is vital for those of us who wish to survive and prosper in today's complex, technologically oriented society to appreciate the scientific method and its application. Students are encouraged to demystify science by understanding its basic methodology and limitations. As a result, they become curious and begin to enjoy reading articles on scientific subjects. They also come to stop regarding themselves as the problem when they don't understand a scientific issue and recognize that most scientific topics can be presented in terms understandable to non-scientists. In addition, students are encouraged to view themselves as capable of judging whether an argument is convincing or not, and not leave such judgements up to the experts.

FIELD TRIPS

Integrated into the course syllabus are field trips taken around the New York metropolitan area (Feldman, 1992). In a class of twenty five students I have found that about three either own automobiles or have access to one; thus, along with my car, we have a bit more mobility than would be the case if all trips were taken by public transportation. These trips enable the students to have the hands-on experience that is crucial to the mastery and appreciation of geology. Each trip lasts about three hours and is, according to Orion (1989), a "learning event," an indispensable component of the learning process. By virtue of constant exposure to various rock types (both during and on successive trips) students learn to identify igneous, sedimentary and metamorphic rocks in outcrop. After studying the hand specimens provided in class, a visit to an outcrop is an enlightening experience. Beginning geology students are made aware of the variations in rocks that cause confusion in hand specimens but become understandable when viewing the entire exposure.

The most effective way to teach geology is by having students pick up, touch, feel and collect real specimens in an outdoor setting rather than reading about them in a textbook or lab manual. Molnia (1994) noted that during a field trip to an exposure of glacial till, a handful of each till and simple instructions on how to feel differences in matrix grain size provided a far more memorable example of the earth materials considered as potential containers for waste than reading a description of the same materials.

Described below are trips taken during the semester, after the class had the opportunity to examine hand specimens of minerals and rocks. All data collected by the students is submitted as a field report and graded:

TRIP #1

On this trip the class visits three outcrops in the New York City Group: Fordham Gneiss, Inwood Marble and Manhattan Schist. Students are introduced to the rocks upon which they all live. For the most part, houses of those living in Manhattan are built on either Manhattan Schist or Inwood Marble while those in the Bronx are built on Fordham Gneiss.

At the Fordham Gneiss outcrop, near the Jerome Avenue Reservoir in the Bronx, we study differential weathering patterns and boudinage structures. Strike and dip of the various rock outcrops are noted by use of a Brunton compass and, later in the term, students construct a structural cross section from New Jersey to the Bronx using the information collected on the trips.

The next stop is an outcrop of Inwood Marble, a relatively soft rock that underlies the Harlem River and adjacent floodplain (e.g. the area from the river west toward Broadway). Here the students use cold, diluted hydrochloric acid as a field test for marble and limestone, and are able to visualize how the hardness of a particular rock affects the topography (the hard rocks generally form ridges while the softer rocks form valleys). Just west of the Inwood Marble a ridge of Manhattan Schist, significantly more resistant than the marble, sticks out prominently from the flat streets of Inwood. The abundant mica flakes sparkle in the sunlight and make the schist easy to identify.

TRIP #2

The class next visits Inwood Hill Park in the northwest section of Manhattan Island. Adjacent to the park is exposed a unit of the Inwood Marble that beautifully illustrates differential weathering by virtue of the fact that the dolomite-silicate units stand in high relief while the calcite marble forms depressions (Merguerian and Sanders, 1991). Structurally, the area is very interesting in that the rocks are folded into a plunging anticline, the core of which consists of poorly resistant Inwood Marble and has been eroded. Other features of interest studied in this area include subglacial potholes formed by streams underlying the Wisconsinan glacier, a roche mountonee, and a glacial erratic.

Students are able to get a more regional view of the geology by observing the Palisades sill across the Hudson River. The sill dips at an angle of about 15 degrees to the northwest and intrudes into the Newark Supergroup, while the New York City Group dips southeast at various steep angles.

TRIP #3

If cars are available we tour lower Westchester County and observe the numerous dikes intruding into the Fordham Gneiss. Two "Tuckahoe" Marble (=Inwood Marble) quarries are noted and the general topography of the area is observed (the marble forms the low lying areas).

TRIP #4

One of the most fascinating trips we take is a walk up Fifth Avenue in Manhattan from about 42nd to 62nd street, during which time we observe a variety of building stones that, as noted by Horenstein (1989): 1. show how these stones respond to the processes of weathering, and thus provide insights for future use and, 2. record changing architectural styles and thus are an important historical record. Horenstein noted how they are an important resource for students, an outdoor classroom of worldwide stratigraphy and paleontology, including strata no longer exposed in their original setting and that they serve as an excellent way to popularize geology. Some examples of buildings visited are described below.

Across from Grand Central Terminal on 42nd Street, just outside the Home Savings of America Bank, are two columns of "Stony Creek Granite" the westernmost of which contains some small stringers of accessory pyrite (fool's gold). I often begin

the trip here by telling my students that "only fools keep gold in a bank." Our next stop is in a walkway between 44th and 45th streets just west of Fifth Avenue. The walls along this passage reveal numerous large brachiopods with internal morphologic structures such as the crura, cardinal process and dental plates. Also, many solitary corals are visible on the walls. We then head north toward the British Building at Rockefeller Center where the students observe a Middle Devonian limestone form the United Kingdom. Fossils include corals and stromatoporoids (Favosites, Stromatopora) along with brachiopod and crinoid fragments. The fauna is typical of a reef environment and, by noting the wall panels closely, students can easily see that the stone is brecciated, indicating a fore-reef talus accumulation as a result of wave action (Braithwaite, 1966; Horenstein, 1989).

Saint Patrick's Cathedral, located between 50-51st streets, is interesting because it is built of Inwood Marble, a rock the class has seen previously in upper Manhattan. Generally, the farther north one goes the more durable this rock becomes. It is extremely friable in upper Manhattan but the blocks used here are more resistant.

One of the most fascinating stops is at the Tischman Building (666 Fifth Avenue) where the lobby walls are full of cephalopod molluscs (Tornoceras, Beloceras, Mantioceras) and rare nautiloids and crinoids. The walls are panelled with a Devonian "French Rouge Antique" quarried from the southern edge of the Massif Central, France (Horenstein, 1989). Gignoux (1955) interpreted the red limestone as a deep water deposit, the red color originating from islands that weathered in a tropical environment. The low diversity is indicative of a dysaerobic environment and, the organisms found as fossils may have been washed into the basin from adjacent well-oxygenated highs.

The Pierre Hotel, at 62nd Street and Fifth Avenue, has polished columns that contain numerous brachiopods. The fossils also show a geopetal fabric, that is, the shells indicate the original orientation of the surrounding rock. Soon after the animal died the soft parts decayed, mud filtered into the shell and was deposited parallel to the sediment-water interface. Subsequently, a calcite cement formed in the void. When viewed in cross section these shells enable one to tell which way was up simply by noting the orientation of the line denoting the mud-cement boundary.

DISCUSSION

Upon completion of the trips described above, students gained insight as to how geology is related to their lives. Inner-city students often have little experience with geologic processes and are used to observing concrete rather than natural rock outcrops. Therefore, after seeing so many examples of different rock types, the effects of weathering and, inclusions of fossils in building stones, they get some feeling for how the subject relates to their lives and experiences.

An additional benefit of the trips is an increase in the students' geographical knowledge, due mainly to discussions of the origins of various building stones. Those that have fossil inclusions from other continents, for example, provide a basis for discussing plate tectonic theory that requires a knowledge of world geography.

Finally, observation of many minerals on field trips enables me to discuss current issues in geology that are health-related, such as the asbestos problem. Space constraints do not permit an in-depth explanation of this but, as an example, I point out

studies (e.g. Gunter, 1994) in which he notes that according to methodology used by some today (keeping in mind that the upper limit for human exposure is whatever dose corresponds to a one in a million death rate), if two people die per year in the United States from "something" (i.e. asbestos), that "something" should be considered bad and removed from the environment. However, cigarette smoking causes approximately 300,000 deaths per year and cigarettes are allowed to remain in the environment.

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BIOGRAPHICAL NOTE

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IN RESPONSE TO CONFLICT: AN INNOVATIVE AND PRACTICAL APPLICATION OF INTERPERSONAL COMMUNICATION COURSES

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A liberal education frees the individual. It informs individuals so that they are free to exercise choice, empowers them to respond in responsible and constructive ways, and shows them how to apply newly acquired knowledge in everyday life. Meanwhile, when faced with a problem to be solved, an interpersonal conflict, or legal dispute, many people are constrained by self-defeating behavioral patterns, imprisoned by negative attitudes, and respond in ways that may be described as reactive or ignorant. They need to realize that they have options and are free to make choices that are of greater social value and that can improve the quality of their lives.

To free the individual, both on an attitudinal level as well as on a behavioral level, people need to adopt certain values and attitudes and learn specific skills that encourage constructive problem solving and resolution of interpersonal conflicts. One way to institute a different set of values and skills is provided by AVP (Alternatives to Violence Project) and peer mediation training programs. This paper describes how the AVP and peer mediation concepts, principles, and skills training may be included in basic and advanced interpersonal communication courses within the school of Liberal Arts and Sciences at a state College in the northeast and how the exercise of the newly acquired skills may be linked with the Office of Vice President for Student Affairs.

What AVP and Peer Mediation Offers Teachers of Interpersonal Communication

Before examining the program at New Paltz, we wish to first explain a few reasons why AVP and Peer Mediation training should interest teachers of interpersonal communication. There exist today a number of different ways to teach courses in interpersonal communication ranging from humanistic to social scientific, but many approaches share some common features that make them ripe prospects for the concepts, principles and skills taught in AVP and peer mediation.

First, teachers of interpersonal communication are interested in exercises that cover a broad range of trust building and cooperation, self-presentation and self-assertiveness, perception and empathic listening, conflict resolution and conflict management, expression and management of feelings, as well as verbal and nonverbal communication skills. AVP training manuals are a rich resource containing numerous exercises for teaching these skills. The exercises devised by AVP and mediation trainers focus on these skills and offer a useful framework for interrelating the skills. For example, AVP uses the idea of "community building" and "transforming power" (empowerment) to help students see the relevance of many of the skills being taught.

Second, teachers of interpersonal communication often desire to broaden their students' options so that they do not respond habitually when in communication situations but instead consider alternatives. Similarly, many teachers compare proactive to

reactive behavior in an effort to make students aware that they can choose to take charge of their lives and make a difference in areas that they felt were impossible to influence or control. On both counts, expanding students' options and encouraging proactive behavior, AVP and peer mediation provides training that is consistent with the aims of many teachers of interpersonal communication.

Third, teachers of the course are likely to argue that interpersonal communication skills are in great demand and are useful to society. Emphasizing alternative ways to manage conflict in interpersonal communication courses helps to meet a timely need. For young people, the risk of violence to resolve interpersonal conflicts is greater in school and at college than anywhere else (Coulter, 1989). We take the position that the inclusion of AVP and peer mediation values and skills in courses in interpersonal communication enables students to learn ways to resolve conflicts without resorting to violence. Thus, AVP and peer mediation offers training focused on socially significant issues that are also of paramount interest on the college campus.

Fourth, interpersonal communication teachers would like to present their course material in a lively, varied, and interactive teaching style. One of the attractive features of AVP and peer mediation training is that the exercises involve students, create a lively, interesting atmosphere in the classroom, and require a great deal of interaction between the students and between the teacher and students; so that no one loses interest or becomes too tired to learn from an exercise.

Finally, many teachers of interpersonal communication are interested in the experiential approach to teaching skills. In experiential teaching/learning, a teacher cannot succeed simply by lecturing or conducting classroom discussions over the material. Instead, the classroom is converted into a human laboratory where students learn some, if not all, of the course content by task-engagement, sharing personal experiences, and role-playing. Thus, students not only learn useful skills by actually using them, but they also learn how these skills apply to their own lives. By providing exercises on how to deal with conflicts, AVP and peer mediation training helps young people cope with situations they frequently encounter and have difficulty managing.

Because of the compatibility between the interests and desires of many teachers of interpersonal communication and the content and teaching style utilized by AVP and in peer mediation training, many of a teacher's favorite exercises, preferred textbooks, academic definitions of basic concepts, and grades based on tests, homework assignments, and papers may be retained. Moreover, the dominant teaching style associated with AVP and peer mediation training as facilitator of student learning rather than critic or lecturer has been practiced by some teachers of interpersonal communication already. What AVP and peer mediation offers teachers of interpersonal communication is an excellent set of exercises, teacher training in role playing techniques, reinforcement of a facilitator style of teaching, and a (community building and conflict resolution) framework for interrelating the skills and for making them relevant in the lives of the students.

Having explained the relationship between AVP, peer mediation and courses in interpersonal communication, we are in a better position to describe how these conflict resolution training programs may be integrated into interpersonal communication courses.

One Way to Incorporate AVP Training in the Basic Interpersonal Communication Course.

What is AVP? AVP is a training program that promotes community building, empowerment, effective communication, and conflict resolution skills through nonviolent means (AVP, 1986). AVP offers a unique and useful set of values. Unfortunately the dominate values in American culture tolerate or even encourage negative, destructive responses that (1) usually involve competition, dominance, and/or provocation, (2) often produce hostility and violence/abuse, causing the conflict to escalate and get out of hand, and (3) frequently result in a breakdown in communication and a disruption of normal relations. American society has become one of the most competitive, violent, and individualistic. Young Americans are encouraged more to concentrate on winning and less on caring about other people and less on developing a sense of family, community, and national unity. AVP counters these attitudes by promoting values that encourage community building, effective interpersonal communication, and constructive conflict resolution.

In addition to the attitudes and values that are promoted in AVP training, the project teaches constructive concepts and skills. AVP training gives young people and adults more knowledge to make choices, generate options, make decisions, communicate, and solve problems. Students find that there exists no one "right" answer/solution but, rather, multiple ways to resolve problems. In short, training programs focus on empowerment and on the need to creatively explore solutions to interpersonal conflict so that all parties may be satisfied with the outcome.

AVP at SUNY at New Paltz.

In the Spring of 1993, a professor in the Department of Communication at SUNY New Paltz, who has written on the subject of interpersonal conflict (Cahn, 1990, 1992, 1994), invited a team of AVP qualified trainers to train 18 volunteer students from his basic and advanced interpersonal communication courses. A basic course in AVP was conducted on campus during the last weekend in April (Friday 6-9PM; Saturday 9AM-9PM; Sunday 9AM-noon) for a total of 18 contact hours.

Next Spring a more ambitious attempt will be made to offer both the basic and advanced AVP workshops as a significant component of the basic course in interpersonal communication (90202) which will be offered from 7-10PM one night a week over the course of a semester. As part of the communication department's registration of its students in communication courses, students are being informed of the unique approach being offered in this one section; so that they are free to choose it or another section of the course that is more traditionally taught. In keeping with AVP, the goal of the newly devised course in interpersonal communication is to train young adults to respond positively and constructively in interpersonal conflict situations. Overall, training activities are designed to promote the following: Self-Esteem/affirmation, Community Building, Communication, Problem Solving Skills, and Empowerment.

The theoretical part of AVP is taught through exercises and discussion how they relate to community building, empowerment, communication, and conflict resolution (AVP, 1986; Bickmore, 1984). The practical part of the basic and advanced AVP courses is included in each course's approximately 9 sessions, averaging 2-1/2 hrs per session. Beginning with practical exercises designed to affirm one another, the basic

course goes on to work on communication skills, cooperation, and eventually introduces conflict resolution which is pursued in greater depth in the advanced course.

While training in AVP seems particularly appropriate in a basic interpersonal communication course, training in peer-mediation provides opportunities to teach additional communication and conflict resolution skills beyond those normally taught in the basic interpersonal communication course. They may be integrated into upper division interpersonal communication courses. The following is a description of how peer mediation training amy be included in an upper division course in interpersonal conflict.

One Way to Incorporate Peer Mediation Training in Advanced Interpersonal Communication Courses.

What is Peer Mediation? Mediation is the intervention into a dispute by an impartial third party who has no authority/power in the decision-making process. Peer mediation in educational institutions is conducted by fellow students and involves the managing of disputes between students. A dispute may be defined as an interpersonal conflict that has reached a point where the parties are unable to resolve the issues by themselves due to a breakdown in communication, and normal relations are unlikely until the dispute is resolved (Burrell & Cahn, 1994).

Because the introduction of a neutral peer (as a third party) into a dispute may restore communication and normalize relations between college students, mediation is of interest to teachers of interpersonal communication and Vice Presidents for Student Affairs. As in the community at large, college mediation is especially recommended in cases that involve an interpersonal relationship. When people must live near one another as in a residence hall or apartment complex or attend classes at a school or college setting, a breakdown in communication accompanied by harmful, negative emotions may make it difficult for disputing parties to continue living, studying or working together in close proximity without escalating the conflict. In the college's classroom and residence hall environment, peer rejection and violence may be prevented or relationships reorganized through mediation. The intervention by a neutral peer trained in mediation offers the disputing students an opportunity to come together in a structured setting to talk about their differences and how they might resolve them constructively (hence the term "nonadversarial" mediation). Therefore, the skills developed in peer mediation training appeal to those interpersonal communication teachers who focus on relationship development and maintenance.

Mediation Training at SUNY at New Paltz.

The training of the New Paltz campus mediators occurs in an upper division course in interpersonal conflict. Training in peer mediation provides a useful context for practicing basic interpersonal communication skills and for exercising more advanced skills.

In addition to practicing basic interpersonal communication skills, mediators also learn the following technical mediation skills: Preparing an opening statement, building an agreement, using and encouraging effective communication skills, writing the agreement, and preparing a closing statement.

The theoretical part of the training is conducted in a classroom setting. Following

a state prepared videotape of three community mediation sessions which emphasize a number of key aspects of mediation, the theoretical part of the course consists of lectures on the following topics: the nonviolent types of conflict resolution (adjudication, arbitration, conciliation, ombudsman, and mediation); a definition of mediation; a brief history of mediation in the US and New York state; different cultural perspectives on mediation; theoretical sources of conflict; the rules theory approach to mediation; and the role of the mediator as a communicator (e.g., active listening, avoiding arousing defensiveness, helping orientation) are discussed. The theoretical material is covered in detail in Cahn (1992, pp. 40-71) which is an assigned reading.

The practical part of the training is conducted over a weekend in a workshop setting based on materials contained in Aks (1984), Aetna (1993), and Dreyfuss, Carter, and Zimmer (1991). After introducing the trainees to a description of the campus mediation program, the training consists of the following exercises: a Prisoner's Dilemma Simulation to emphasize the harm of competition and benefits of cooperation in resolving conflicts; exercises for each stage of successful mediation (setting the stage, making an opening statement, identifying issues and fact finding, structuring the discussion, writing an agreement, and concluding the mediation). Exercises also deal with selection of a neutral site for mediation, effective arrangement of tables and chairs, and mediator communication techniques for maintaining neutrality and objectivity.

Throughout the training, the focus is on the mediator's role and skill development. Essentially, trainees are taught how mediators take charge of the mediation, develop and extend resources of information, enforce rules for the session, encourage disputants to make constructive proposals, write satisfactory agreements, and fill out various forms required for data reporting and record keeping. Trainees are taught a variety of communication skills that facilitate the mediation and create an atmosphere for constructive resolution of the conflict (Burrell, Donohue, & Allen, 1990; McKinney, Kimsey, & Fuller, 1990).

Toward the end of the training, a campus prepared videotape of an entire mediation simulation is shown to illustrate a typical mediation involving college roommates. Then, trainees are assigned roles to play in fictional mediation sessions followed by critique and discussion. Every trainee plays the role of co-mediator at least once and the role of a disputant to experience what mediation is like from the disputants' point of view.

Overall, mediator training activities include many of the same concepts and skills advocated by AVP and teachers of interpersonal communication, namely, cooperation, communication, self-esteem/affirmation, and conflict resolution skills. Peer mediation programs in schools and colleges also empower students to resolve student-to-student disputes. Mediation training gives students more knowledge to make choices, generate options, make decisions, communicate, and solve problems. Finding that there is no one "right" answer/solution they discover multiple ways to resolve problems. In short, training programs focus on the need to creatively explore solutions to interpersonal conflict so that all parties may be satisfied with the outcome. It should not be surprising to learn that training in peer mediation is consistent with the philosophy of AVP and many interpersonal communication teachers.

In advanced interpersonal communication courses, students learn how to help oth-

ers restore communication and build or rebuild a workable relationship. A mediator's immediate goal is to build a cooperative context for mediation (and discourage competition, domination, or provocation) encouraging disputants to collaborate as they create their own agreement, setting rules and enforcing them to create a climate that is conducive to communication. Mediators do not guide the parties to the mediator's solution, but rather facilitate the communication process so that the parties themselves can determine the terms of agreement (Singer, 1991, December). People tend to abide by decisions and solutions to problems that they develop themselves more than when decisions and solutions are imposed on them. Ideally, a mediator's long term goal is to educate disputants about their future conflict needs and their ability to create additional solutions to problems.

Post Training Opportunities

While interpersonal communication teachers consider incorporating the skills of AVP and peer mediation in their courses, they should also investigate opportunities on campus for their students to practice their newly acquired skills. The campus agency that is very interested in applying these skills in student life is the Office of Vice President for Student Affairs. This administrative officer on many campuses is interested in helping students manage their interpersonal conflicts and in curbing student-to-student violence. In recent years, this office has become a major source of information for students who wish to avoid interpersonal problems or deal with problems associated with harassment, racism, unwanted sex, and other aggressive student behaviors as well as alcohol and drug abuse. The office may oversee campus mediation, crisis intervention, psychological, and drug/alcohol abuse centers. It may also sponsor outreach programs in the residence halls. The Office of Vice President for Student Affairs and the Office of Student Housing may also offer opportunities for students with AVP and peer mediation skills. Through the student affairs office, students may participate in socially responsible extracurricular activities, intern, or gain employment in the student activities area following graduation.

Conclusion

Bit by bit, the concepts, principles, and methods of AVP and peer mediation are making headway into US schools at all levels as ways to manage conflict. It is the hope of the movement's leaders that alternative dispute resolution will continue to grow in academia and eventually spread out into the larger society.

As Singer (1991, December) states: Perhaps the United States would not be the most litigious country in the world had millions of students been trained in conflict resolution 30 or 50 years ago. Hopefully, the litigation epidemic of this country will subside as generations of students trained in alternative dispute resolution eventually spread through all levels of the work force (pp. 33-34).

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The "New" Rhetoric Across the Disciplines

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It is important for readers to know that this is a story of conversion. I am not a trained rhetorician; my degree is in literature and I had the standard training—or lack thereof—for teaching writing. I came to rhetoric--a field I had resisted because "logic" escaped me--when a university Rhetoric Department hired me to teach in their writing program. The tools I learned and taught, especially informal logic tools, convinced me that students learn writing and thinking more effectively when they learn argumentation as the dominant mode.

Rhetoric is a transferable skill, and it has certain approaches that are fairly universal because it is based originally on our understanding and interpretation of Aristotle's *Rhetoric*. It was, as many people know, Aristotle who set forth the rhetorical triangle—ethos, pathos, logos—and explained syllogistic thinking and how it applied to communication. In our century, except when we study formal logic, we have focused on informal rhetoric, such as Stephen Toulmin's approach, which acknowledges that human thinking has few certainties but we can at least deal in probabilities. Toulmin's method acknowledges the structure of the syllogism but makes it more flexible to suit a world less convinced of objective truth. He adds qualifiers and conditions of rebuttal and other modifications that are more consonant with our relativistic view of things.

Popular definitions of rhetoric, especially when applied to composition, include what Sharon Crowley calls "EDNA"—exposition, description, narration, and argument. Recently educators think of rhetoric as primarily argumentation, which again reaches back to Aristotle, who thought of communication as largely persuasive, and to the Sophists, who thought communication was limited to persuasion and got the reputation for being manipulators. Even more recently rhetoric has had a "new" tacked on, and it is that "new" rhetoric with which I am concerned today. I don't mean Crowley's new rhetoric, which she says was invented in the eighteenth century. She claims this rhetoric privileged the "single authorial mind, rather than community wisdom, as the source of invention and the concomitant privileging of texts as reflections of the workings of this sovereign authorial mind" (12). I do not plan to focus on Crowley's definition, except to note that I believe it is "community wisdom" in the disciplines that will inform our rhetoric here.

The "new" rhetoric I am focusing on today is in keeping with the definition of Paul Connolly of Bard College's Institute on Writing and Thinking, a rhetoric that respects difference, that does not view arguments as assaults, and that does not even view them as particularly adversarial (workshop pamphlet); rather argument is a step into the circle of discourse of the discipline, an immersion into the pool of thought that defines the discipline. Once inside the circle, students necessarily form their own views, but every effort is made to understand the views of others. Furthermore, students are encouraged to press for difference, because growth and change can only occur if we escape the status quo, and the only way to escape is to be able to consider different ways of looking at subjects.

Inquiry and Opinion

This kind of rhetoric has advantages that bear consideration for WAC programs. At our university, we have implemented a freshman writing program that focuses on argumentation from the beginning—and I will use the terms rhetoric and argumentation almost interchangeably here—and it is working so well for our students that we are now training our faculty for a WAC program that will be primarily rhetorical. I am going to outline what we see as the perceived advantages, and then will cite briefly some textual excerpts from basic texts that ostensibly do not have arguments, but that are amenable, with some probing, to rhetorical interpretation.

First, it is important to emphasize again that rhetoric is a skill. It can be considered a discipline—certainly the Rhetoric Departments at graduate schools think it is—and when it is, it has a literature and philosophy of its own. But here rhetoric is a set of tools, with its own terminologies that are transferable; it is a structure, an organizer, and in the older sense of the term, it is disciplinary. If students are trained in rhetorical skills and terminology, they all (along with their instructors) share a means of communication and inquiry that works across the board.

Therefore, the first advantage for WAC programs is that all students have a shared discourse with which to approach reading and writing, and this shared language enables them to communicate with each other, with their professors, and with the world after graduation. As I hope will become apparent, rhetoric is everywhere, and once we acquire the tools, we can use them in whatever discipline we are studying, at whatever job we are working, and to interpret and communicate as a citizen with the wider world.

The tools we give our students at their most basic are names and concepts for textual properties, including those that are unsaid and unseen. Most of our instructors use everyday terms, although some of them plug in Toulmin or Aristotelian terms interchangeably. We discuss conclusions, claims, or theses: these are the sentences that define the opinion or assertion of the author (both textual and student). We examine how these claims are supported by evidence, or data, and we discuss the kinds of evidence that work. We discuss the reasons we believe the evidence does support the claim. We check out any restrictions, either implied or given, that limit the conclusion. We pay attention to the way other views are summarized and whether or not they are sufficiently considered. We root out fallacies. And, most important in my view, we examine the assumptions, written or unwritten, that undergird the text. These assumptions are major premises, or warrants, and are the key to understanding where, in student jargon, the "author is coming from."

If a student is capable of ferreting out the assumptions underlying an author's claims—the values and beliefs upon which the argument rests—then they have achieved the most valuable critical tool they will ever learn. For instance, I might make the very simple claim that all upper-division university courses in the humanities at University X should be writing-intensive. My evidence is that in writing-intensive courses, students learn more about course content, they produce more of their own thinking, they learn to write better, and they contribute more to class discussion. My evidence is supported by other authors who have done studies, and by evidence from my own humanities classes. I've qualified my claim by saying the courses are only upper-division and humanities. So far I haven't succumbed, I hope, to any fallacies. My

premises, or assumptions, are that my audience would find it desirable for students to learn more content, to think more, to write better, and to contribute to class. My evidence will have to show these connections. My audience will have to believe that studies of students are fair indications of student behavior, and that what students have done in the past is a good predictor of what students will do in the future, etc. If my audience grants my assumptions but does not care about whether students write better or contribute to class, I will not get very far with my argument.

At this point we might ask what's so new about all this, since this is a standard rhetorical approach to texts and to writing. And I don't claim that it is particularly new, except for its non-adversarial emphasis, but I hope to show how, when it is plugged in across the disciplines, it yields something new.

Before we do that, though, I want to examine the other skill students acquire when they study rhetoric, and that is the rhetorical triangle. In Aristotle's view, all communications are composed of three elements: ethos, pathos, and logos. Ethos is the authority and credibility of the speaker or writer, pathos is the appeal to the emotions—the beliefs and value systems—of the audience, and logos is the evidence, support, facts, statistics, what we think of as the "hard stuff" of logic, the stuff no one can quarrel with. In the world we lived in until fairly recently, we privileged logos, and we probably still do: we still think that being "logical" is a far cry from and far better than being "emotional." However, facts have become more slippery in recent years as philosophers and theorists reconsider the nature of truth and the location of reality, and logos is beginning to be seen as more intertwined with pathos and ethos than we have thought for quite a while. This would not surprise Aristotle, who felt that the three elements of the triangle deserved equal weight.

In fact, our privileging of logos has left out important elements in the communication triangle and even in the formation of ideas. I believe that if we rescue pathos and ethos for our students, we will be doing them, ourselves, and our curriculum a great service.

And that is where I see the conjunction of the tools of rhetoric and WAC. Let's take them one at a time.

If students learn how to read and how to write by exercising their rhetorical skills, they will be far more engaged with their subject. When we analyze texts, or when we construct texts, that are issue-oriented and audience-centered, we absolutely have to think hard. Issues imply controversiality, and controversiality implies more than one opinion, and diversity of opinion implies that a student has a right to one. If a student is in the process of reading about and forming an opinion, she is instantly responsible for her own learning. It is incumbent upon her to find out for herself not only what this author thinks, but what other authors think, and then ultimately what she herself thinks. To set in motion this complex series of initiatives, she must take steps to determine the ethos of the author she is reading, she needs to find the claims, to see for herself the validity of the evidence, to judge the qualifiers, find the fallacies, and most importantly, to discover the hidden assumptions. Such activity is intellectual work at its best, and it is also—and this matters—fun, once you get the hang of it.

Once students have analyzed as many texts as they need to form an opinion, they again consult their rhetorical tools to write their own text. The same skills come into play, only this time in behalf of their own argument. They must learn how to establish

their own credibility, they must marshall the evidence that convinced them of their own opinion, and they must figure out the best way to reach an audience that, if not necessaryily oppositional, may be skeptical and may hold a different point of view—or, in some cases, simply doesn't know enough about the subject to have formed an opinion.

Students trained in rhetoric usually have a different approach to texts, because they are so aware of the structures we all use to build an argument. They are more equipped to be critical readers. They don't take things at face value. They have learned how to question the author's ethos, how to analyze the logos, and how to figure out the pathos appeal: such students are less vulnerable to that kind of persuasion we think of as manipulation.

Let's say a student is taking a journalism course, or an introductory course in writing in which journalism articles are used. They are reading Melvin Konner's article, "The Aggressors," which posits "proof" that men are more violent than women because they harbor testosterone, a hormone associated with violent behavior. He questions researchers who believe the differences in aggression between men and women are learned, or social, and asserts that "that belief, a tenacious modern myth, becomes less justified with every passing year: sex difference in the tendency to do physical harm is intrinsic, fundamental, natural--in a word, biological" (71). He then presents several studies on animals and uses language such as the following: "[Studies show] that the differentiation of behavior--especially sexual and aggressive behavior--depends in part on early testosterone exposure. This has proved to be true of rats, mice, hamsters, rabbits and monkeys, among other species. Clear anatomical differences have been found in the hypothalmus and amygdala regions of the brain as well as the preoptic area" (71). Students in the journalism class can understand from this passage that Konner has a clear, unambiguous claim and provides some information from studies on animals to support it. They will deduce that Konner believes that animal studies "prove" information about humans, that anatomical structure influences behavior, that exposure to certain hormones influences behavior, and that (more subtly) readers of the magazine will be impressed with the scientific anatomical name of the parts of the body. They will probably deduce many other properties of this text and of Konner's point of view that are too numerous to mention here. They will be, in every sense of the word, critical readers.

This same student in the journalism course might also be taking a course in business. In a well-known article on business ethics, author Albert Carr asks "Is Business Bluffing Ethical?" and argues that "the ethics of business are game ethics, different from the ethics of religion" (*Harvard Business Review*). He quotes a representative from Congress as objecting to this notion on the following basis: "Maybe that's good enough for some businessmen, but I can tell you that we pride ourselves on our ethics. In 30 years not one customer has ever questioned my word or asked to check our figures. We're loyal to our customers and fair to our suppliers. I regard my handshake on a deal as a contract. I've never entered into price-fixing schemes with my competitors. I've never allowed my salesmen to spread injurious rumors about other companies. Our union contract is the best in our industry. And, if I do say so myself, our ethical standards are of the highest!" Clearly this author wants the reader to mock the representative who doesn't believe that business ethics are game ethics, and clearly he

expects us to be able to discern the difference and the underlying premises of each statement the representative makes. However, how are students to figure out the unmentioned premises of either the representative or the author unless they are trained in rhetorical, logical, syllogistic thinking?

Even if texts—both in the discipline and of the student's—are not overtly argumentative, the skills can still be applied to learning in the discipline. Before analyzing some across-the-curriculum texts through the rhetorical prism, though, I would argue for inclusion of more controversial material in courses that generally are considered objective, factual, expository. All disciplines have arguments; they all have issues. But as I looked over basic texts for several disciplines at my university, I saw only minimal recognition that experts in the field might disagree about their internal issues—or that there even were any issues. Why are basic texts so certain? It may be that many professors bring in the issues of the discipline themselves, but it seems odd to me that the textbooks themselves don't raise them. One basic text I read was on the anatomy of the brain—for a physiological psychology course. It did not examine anywhere why it is important to know the anatomy of the brain for psychology, but it did indicate that "Correlations between the anatomy and function of various regions of the neocortex are of major interest to biopsychologists" (Pinel 87). Following that statement were four paragraphs full of conditional passive verbs: "The limbic system is a group of interconnected telencephalic and diencephalic structures that are believed to be involved in the regulation of motivated behaviors. . . . The amygdala, is also considered to be a component of the limbic system. . . . The basal ganglia are thought to play a major role in the performance of voluntary motor responses" (87). A student trained in rhetoric would note that in a text full of absolute assertions, there was suddenly a good deal of doubt. It would be possible, since the text does not address the issue, for the instructor to raise the issue of why there was doubt, and to introduce the student to areas that are not yet fully explored. Clearly the anatomy of the brain has controversy.

In another course, the controversies were included in the texts, set off in boxes called "Concepts and Controversies" (Cummings). Here the authors were also talking about science—it was a text on heredity—but they acknowledged even in their title that this science has controversies: Human Heredity: Principles and Issues. As we learned about the structure of chromosomes, we were also introduced to the Human Genome Project, and students were invited to explore and form opinions on the issues raised by genetic work.

Now for a couple of texts that ostensibly have no argument. Even if they really don't, they do contain the assumptions of the discipline. We know that psychologists believe that how we were treated as children affects our adult identities; anthropologists believe that studying other—and primitive—cultures will illuminate our own cultures (and a deeper assumption is that we *want* to illuminate our culture); historians believe that history is an interpretation—a different major premise from what they believed a century ago, when they believed history was a collection of known data—facts.

Consider the assumptions of our market system, according to a popular basic textbook:

The basic economic argument for the market system is that it promotes an

> efficient allocation of resources. The competitive market system guides resources into production of those goods and services most wanted by society. It forces use of the most efficient techniques in organizing resources for production, and is conducive to the development and adoption of new and more efficient production techniques. The "invisible hand" will in effect harness self-interest so as to provide society with the greatest output of wanted goods from its available resources. This, then, suggests the maximum economic efficiency. This presumption of allocative efficency makes most economists hesitant to advocate governmental interference with, or regulation of, free markets unless reasons for such interference are clear and compelling.
> *Freedom*: The major noneconomic argument for the market system is its great emphasis on personal freedom. . . . Only the market system can coordinate economic activity without coercion. The market system permits--indeed, it thrives on--freedom of enterprise and choice. Entrepreneurs and workers are not herded from industry to industry by government directives to meet production targets established by some omnipotent governmental agency. On the contrary, they are free to further their own self-interests, subject, of course, to the rewards and penalties imposed by the market system itself. (McConnell and Brue 85)

Needless to say, these passages are fraught with weighted words for Americans. Whether the words are freighted *because* we are in a market economy or vice-versa, no student of rhetoric would overlook the repetition of "efficient, "freedom," "choice," etc., nor would they ignore the opposite: "forces," "coercion," "herded." Underlying words such as these are premises that the concepts enjoying efficiency, freedom, choice, etc. are in opposition to those that are forced, coerced, herded. Which would you choose? Rhetorically trained students become aware of the force of such language.

I said above that students who know rhetorical skills and principles are less manipulable. However, they also might be more difficult in the classroom. Virginia Woolf once warned us against "the power which a mature mind lecturing immature minds has to infect them with strong, if passing, opinions, and to tinge those opinions with personal bias" (*Three Guineas* 155-6). Most instructors, of course, try to be objective, but few of us achieve it. Students who know rhetoric will be more adept at spotting opinion and more equipped to judge whether or not we have a strong ethos for our opinion. Rhetoric across the disciplines will probably lead to classes in which the students are more skeptical, but also more engaged. Most of us would like more creative, intellectual responses from our students; most of us do not enjoy passive classrooms. Rhetorical training practically guarantees a more engaged class because students don't *feel* like receptacles for your knowledge; they feel like agents, judgers, thinkers.

How to Infuse Rhetoric

How can we train our students in rhetoric if they haven't already had it in their first-year composition course? Most students have had some training in argumentation, and if we emphasize a rhetorical approach in our classrooms, we can assume some familiarity with claims, evidence, and audience awareness. Most students know

that an argument has to consider opposing, or different views, that it must provide support, either with hard evidence or with expert opinion, and that the writer must appeal to the audience's beliefs and values—must find common ground with the audience, in order to be successful. Most students will not yet be adept at finding major premises or common ground, but they will at least have been introduced to the concepts. If we encourage both formal and informal writing that is rhetorical in our courses, I think we will find that our students become critical thinkers and agents for their own learning much more quickly than students who stay with expository prose.

For instance, we ourselves may be perfectly aware of the value system of our disciplines, of the beliefs that most practitioners share, and we may not think it is necessary to voice them to students. But if we do, then they will know what they can count on in their audience, if their audience is in the discipline, and they will start knowing our short-cuts. For instance, the psychology professor at our school told me the other day how delighted she was that she got some rats for one of her students. I have a vague notion why rats would delight her, but I'm not fully conversant with the similarities between humans and rats that make them good subjects for testing. I'm assuming the student wants them for testing. I'm sure she tells her students what the rats are good for. But she also discusses in her classroom the pros and cons of animal testing. It is perfectly clear to me that this professor strongly believes in animal testing. And yet she includes on her mid-term exam a question that asks students to explore the question. Assuming she can be fair in her responses to these students, she is not only bringing controversial issues into her course, but she is also making explicit in her classroom the implicit assumption in sciences that one uses rats, not humans, for testing, and further assumes that the discoveries on rats will usually hold true for humans.

In addition to helping students find the assumptions of the discipline, we can give them assignments that exercise their empathetic skills. As Carl Rogers tells us, the best communication occurs "when we listen with understanding. . . . It means to see the expressed idea and attitude from the other person's point of view, to sense how it feels to him, to achieve his frame of reference in regard to the thing he is talking about" (757). To encourage your students to achieve the frame of reference of someone else in the discipline, someone with whom they might not agree—such as the young man with the rats and a fervent animal-rightist—let them play Peter Elbow's "Believing/Doubting Game" (254-300) or write out pro/con arguments or just write out the "opposition's" argument on whatever issue they are considering. Nothing will help students understand another's value system or find common ground more quickly than moving into the other's head for the duration of an assignment.

For informal writing assignments, students can freewrite. In a recent review of freewriting, Richard Haswell said that his study concludes that freewrites by students are far less personally expressive than expected: "Left alone to write at will, most students decline the delights of wandering through the carefree terrain of ungeneralized sensations or memories or story but instead take up, willfully, the burden and constraints of logical argument" (qtd in Fulkerson 45). If students are freewriting in your discipline, they are discovering what they think about it, and very often they will come up with original, provocative ideas, and these ideas will often be in the form of an argument. These ideas may be new or they may be as old as the discipline, but the

more the students are allowed to come up with themselves, the more they will "own" the discipline.

Another strategy for including rhetoric in a WAC program is to change the standard audience for papers and quizzes. Usually these exercises have as their audience the instructor—who does the grading and who knows "everything"—and perhaps the class, who is supposed to have learned what the student is writing about. A student can scarcely feel confident about her ethos if her audience is her professor. Instead, we can put her in the position of the knowledgeable one: give her an audience who knows less than she does, such as the local high school class in the discipline, or a person from another country who is unaware of our history. Varying the ethos and pathos of the rhetorical situation—changing the audience—can produce a very dramatic change in a student's attitude towards an assignment and in her handling of the material.

We can also allow students to debate controversial issues in the classroom. This is different from small groups—which are also helpful, by the way—because students prepare material ahead of time, and they follow certain rules that can be set up. It keeps them focused and provides a forum that is familiar to practitioners of the discipline after college.

We can phrase exam questions that have always been expository into questions that really are asking a question. Instead of: List the terms of the New Deal, ask Why did the New Deal help the country? Instead of What is the impact of the proof of Fermat's Theorem, ask Why was the proof of Fermat's Theorem important to our community?

The new rhetoric is not the easiest strategy for writing—argumentation is usually the last strategy learned in freshman writing because it is perceived as the most complex and difficult—and the "new" rhetoric is even more complex because it does not assume a single opposed view, but several different angles of a view—but I believe that once students acquire the basic skills, they become more active in the classroom, more engaged in the intellectual practice of the discipline, and more aware of their own agency, their own responsibility for discovering what they can on their own. My own assumptions are that we want less passive students, that we want our classrooms to be challenging, and that we want our students to be more inquiring and to learn how, through all these rhetorical methods, to hold well-grounded, informed opinions in our disciplines and, ultimately, as citizens of the community.

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The Teaching of Critical Thinking Through Adolescent Literature

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What is Critical Thinking?

The definition which is the basis for this paper is the following: "Thinking Critically is an active, purposeful, organized cognitive process we use to carefully examine our thinking and the thinking of others, in order to clarify and improve our understanding." (1)

The various activities that make up critical thinking, include the following:

1. Thinking actively
2. Carefully exploring situations with questions.
3. Thinking for ourselves
4. Viewing situations from different perspectives
5. Discussing ideas in an organized way. (2)

Although most educators would agree on the importance of the above, many organizational and operational aspects of the contemporary secondary school militate against the above activities.

What Prevents Critical Thinking?

The first aspect of education which works against critical thinking is the organization of the large, dangerous, crowded, noisy, contemporary high school. The very act of pushing through chaotic halls, getting to the next class on time, and adjusting to class after class, is a source of anxiety to many students. Speed, anonymity, and getting by are the values communicated by this school organization rather than the values of thinking, reflection, analysis, and serenity.

A second structural obstacle to critical thinking is the forty minute class. With announcements, roll taking and interruptions, there are rarely more than 20 concentrated minutes of instructional time in a class and the result is usually fragmentation and superficiality. There is little articulation between teachers (of different subjects) and a typical result is that sometimes a student will have five tests on one day.

The students stagger from class to class, confused by the necessity to instantly adjust to the new vocabulary of each content area, generally unaware of the teacher's plans for that day, vainly scribbling chaotic notes as they listen to each teacher's lecture, trying late at night when they finally get to their homework, to remember what they are supposed to have learned.

The third aspect of contemporary education which militates against critical thinking is the lecture format, the major foe of active learning. What is the lecture format? It means that the audience is more or less listening passively to the communication of information. Is the lecture format always wrong? Of course not. A film is a lecture. Television is a lecture. Listening to the teacher in class is a lecture. Some lectures are good and often the lecture format is essential for quickly giving information or in-

structions. But we must remember that with all forms of lecture format, the audience is engaged primarily in passive learning. Students are not required to participate when the teacher lectures to a large group, occasionally interrupting to ask a fast, literal question of one of the brighter, more dependable students; the result for all but the few who respond is dulled enthusiasm, lowered expectations, and stifled critical thinking.

The individual teacher cannot change the size of the school, cannot change the format of five or six classes a day, cannot change the overcrowded classes or the chaotic halls, but nevertheless, within their own classes, teachers can do much to accomplish the goals of critical thinking.

What Teachers Can Do To Develop Critical Thinking.

Critical thinking across the curriculum is the major way to return significance to education for our disaffected students. It is the teacher's role to give students a reason to read, to come to school, to value education. Students must see the school as an arena in which they can learn and do something which they cannot do alone or at home. They must see the school as providing a unique function, the ability to think critically. Teaching them to think critically and, more importantly, giving them the opportunity and tools to think critically, is the major way to restore interest and significance to education.

The major organizational method to develop critical thinking is through small group (collaborative, cooperative) learning, in which the teacher's role is changed from the traditional one of lecturer to that of guide. In collaborative learning, the teacher functions like an art teacher who goes from student easel to easel, suggesting, correcting, praising, coaching. This is the new and optimum role of the classroom teacher; to go from group to group, listening, suggesting, advising, correcting, encouraging. And the optimum student role is participation, not passive listening. In this format, involvement is mandated. Participation is not a choice. It is the only acceptable student activity.

In small group work, instead of sitting and listening as passive learning, all students take on roles as respondents to what has been read. As they debate, agree, disagree, embellish, juxtapose, relate and imagine, a classroom community of discourse develops which assists and encourages self-expression, critical thinking, and the reflection of thinking in journals and other related writing.

However, organization into small groups is not enough to achieve critical thinking. Certain errors arise in the process against which the teacher must be on guard:

1. Discussion only of literal questions.
2. Organization of small groups into a variety of roles (i.e. secretary, respondent) that are so confusing that they get between the students and the content to be discussed.
3. The grading of group work, which creates tensions and resentments and which also get between the learners and the content.
4. Lack of adequate teacher preparation before class.
5. Blind reliance on commercial materials.

In addition, the basis for critical thinking in small groups must be significant material which is worth studying and worth discussing. Without depth, without ambivalence, without conceptual complexity, there can be no significant discussion. To illustrate: I have seen Social Studies teachers unable to elicit a discussion based on a factual selection in a Social Studies textbook, achieve excited, meaningful debate by using an original source such as "The Gettysburg Address."

Material worked on in small groups to achieve critical thinking must be material worth talking about, worth thinking about, worth imagining about, relevant, and generative.

LAPS and Critical Thinking.

The major method we use to develop critical thinking in adolescent literature is the LAP (Learning Activity Packet), which is specifically designed for small group work. Loosely employing Bloom's cognitive hierarchy, the LAP incorporates the following: objectives stated in student terms, schema (prior knowledge), pre-testing, essential vocabulary, questions that go up the cognitive hierarchy from literal to application, and related writing. LAPs can be designed for an individual class lesson or for a one month or two week unit. Length depends on the material.

The LAP must be prepared at home by the teacher, before class, and in tranquility. There can be no last minute teaching, no "open your book to p. 57," methodology. The preparation of the LAP requires that the teacher function as a researcher, a scholar, an inventor, an originator, a choreographer, a creative artist and as a total professional. The LAP requires the teacher to ask herself, "What do I want them to learn?", "What is the significance to them of what I want them to learn?", and "What methodologies should I use to achieve maximum active learning and critical thinking?"

In small group work with LAPs, all students have the opportunity to participate and speak, not just the bright, responsive student. With LAPs, students clearly see what they are expected to learn and they are given the arc of questions and activities that will enable them to get there. This does not mean that literal questions are eliminated. Literal, convergent and divergent questions all exist within the LAP. There is no set formula for them, but with a LAP teachers can check their planning and ensure that learners do not stay with the literal, that they move upward from what is written to a consideration of higher level thinking, that they will deepen their critical consciousness about life and themselves through engagement with the LAP.

In the classroom lecture structure, it is difficult for the teacher to ask questions on the higher reaches of the cognitive hierarchy and so most questions asked are literal. Time prevents depth and ambiguity. But there is no problem with putting difficult, reflective, ambivalent questions into a LAP. These are exactly the questions that lead to thinking and growth. And now, because of the personal computer, teachers can constantly revise, improve, add and delete, once they have put a LAP on disc.

This is how the revision process works. The students have read Shirley Jackson's short story, "The Lottery", and are now working on LAPs in small groups. As the teacher circulates, she finds that one question is unclear. "How is Mrs. Hutchinson a scapegoat?"

When she finds that students cannot answer this, the teacher as well as the student is now engaged in a learning process. She is learning that she should not have as-

sumed that her students would have the background (schema) to answer this question. "Scapegoat" is an unfamiliar word.

For this present class, she will then have to give them the information, on the spot, so that they may continue their work together. For future classes, she can revise on her computer. The revised LAP will either ask the students to look the word up in the dictionary, ask for brainstorming on the topic, or provide a glossary with the word: 1. a person or group made to bear the blame for others or to suffer in their place. 2. Chiefly Biblical, a goat let loose in the wilderness on Yom Kippur after the high priest symbolically laid the sins of the people on its head.

Once the students know what a scapegoat is, they can discuss it in relation to the story, wonder why that community needs a scapegoat, wonder why any community needs a scapegoat, discuss their personal experience with scapegoats, discuss what they know historically about scapegoats, move from this story which is strange on the literal level to an understanding of it on the symbolic level, to further understanding of what the author was trying to say, and to final evaluation of the validity of her perspective and of her success in getting this perspective across. They also engage in the process of examining their own experience and write in their learning journals, in their LAPs and engage in individual writing (for grading) on the subject. Active learning will have been achieved for all the students. In addition, the idea of "the scapegoat" is generative. It will appear in many other works and situations.

It is difficult to explore with this complexity in a whole class setting. To illustrate: A student teacher I observed was using the traditional whole class organization for the teaching of Julius Caesar. Most of his questions were on the factual, literal level, and then he asked, "Was Brutus an honorable man?" A fine question, worthy of reflection and discussion. One boy raised his hand and slowly responded, "Well...according to his point of view." Then, his voice trailed off as he contemplated the question.

Afraid of losing control, afraid of silence, the student teacher snapped, "I'm not interested in his point of view. Answer yes or no." The student responded, "I don't know," and critical thinking was instantly squelched. No learning occurred.

Had this question been in a LAP for group work, each student could have considered and discussed it with his peers. Speaking, an essential part of the thinking process, would have been engaged in by many students. Critical thinking would have occurred.

And finally, with the use of LAPs, the teacher is freed from the lion tamer stance at the front of the classroom; sometimes sitting in with a group, sometimes selecting an individual to work with, and all the time listening to her students' thinking, an activity which can never be achieved with the lecture method, when the teacher can only listen to herself.

An added value of LAPS is that they eliminate the scrambling to take note which results in generally poor notebooks. If the LAP incorporates all of the material teachers wish to transmit and all of the questions significant to discuss, there is no necessity to take additional notes. Without the necessity to take notes, students are freed for dialogue. Anyone who has ever examined the notebooks of secondary school students understands that much significant content is lost as they struggle to both take notes and listen. But a LAP clearly contains objectives, purposes, interpretations and notes. LAPs can even contain pages for related journal writing.

Collaborative work on LAPs is active learning; writing down lecture notes is passive learning. Arthur Schopenhauer wrote, in 1851, "Fundamentally, it is only our own basic thoughts that possess truth and life for only these do we really understand through and through. The thoughts of another that we have read are crumbs from another's table, the cast-off clothes of an unfamiliar guest. It may sometimes happen that a truth, an insight, which you have slowly and laboriously puzzled out by thinking for yourself could have easily been found already written in a book; but it is a hundred times more valuable if you have arrived at it by thinking for yourself."

The use of LAPs enables students to think for themselves as well as to think about themselves.

The Selection of Material for Critical Thinking

I teach literature to present and future junior and senior high school English teachers and each semester I change one or two books. My usual reason for the change is to add books that encourage more relevant critical thinking than ones already on the list. Without a lowering of standards, it is possible to substitute works which will engage more secondary school students.

One work which goes on and off the list is Herman Melville's novel, Moby Dick, perhaps my own favorite American novel. Teachers tell me that they cannot get students interested in it, even if they show them the Orson Welles-Gregory Peck film. Some teachers have taken students on field trips to Mystic, Connecticut, where they can see how small a real whaler was and thus get additional insight into the danger and boredom of the whaling life, but even this does not necessarily involve them in the book, even with the use of LAPs. Teachers have included questions about such themes as man against nature, the despoiling of the seas, black masses and monomania, but the students remain uninvolved. Probably college is a better time to study Moby Dick.

However, Melville's "Bartleby, the Scrivener" still seems to have the relevance needed for critical thinking on the secondary level. At the beginning of their work on the LAP, some students view Bartleby as an uncooperative nut and see his employer as a patient hero. Others talk about Bartleby's terrible, physically destructive, dead end work, and relate it to such jobs as pushing a cart through the garment district. They also relate Bartleby to other people who have given up, and read the following paragraph about a phenomenon in the Nazi concentration camps:

Within the camps, the Nazis set out deliberately to dehumanize their victims to break down their autonomy and turn them into "docile masses from which no individual or group act of resistance could arise." When they succeeded, the result was the often-observed phenomenon known by camp jargon as Muselmanner, taken from an alleged Muslim belief in fatalism--"People who were so deprived of affect, self-esteem, and every form of stimulation, so totally exhausted, both physically and emotionally, that they had given the environment total power over them."(3)

In their LAPs, students juxtapose Bartleby with the musselmen, discuss giving up, talk about dying as perhaps the only option in which man can still assert his will when that is all that is left. Later they will write on the topic, "giving up."

They talk about how the lawyer's attempts at kindness cannot really work because he cannot put himself in Bartleby's shoes. They wonder aloud about why some have so much and others so little. They speak about the homeless in the streets, the concept

of indifference to the misery of others, about Bartleby's loneliness, and about how little he has in relation to the lawyer. They talk about the recurring motif of "walls;" Bartleby works on Wall Street, he faces a wall, he ends up facing walls in The Tombs, and ultimately he is too exhausted and discouraged to break out of the walls. Bartleby is a prisoner in life before he is a prisoner in actuality.

Student writing on Bartleby has included: writing on the subject of "walls", "prisons", "musselmen", "haves and have-nots," "hopelessness," "giving up," "suicide," "how to help those who have nothing," "the characters of Bartleby and his employer," "the change in their perceptions of Bartleby by the end of the story," and the idea of passive resistance." Moby Dick doesn't work for them. Bartleby does.

Another example of curriculum change exists in the case of Lord of the Flies, another past favorite of mine which no longer seems to reach students. The fact that the kids on the island are savages doesn't seem like much of a revelation to today's students, nor does the fact that people would prefer to follow a demagogue like Jack rather than an intellectual like Piggy or a spiritual leader like Simon.

A substitute which works better is Robert Cormier's The Chocolate War, which raises the question at the beginning, "Do I dare disturb the universe", and ends with the pessimistic feeling that it is dangerous to do so. Attached to this LAP are short articles about whistle blowers such as Karen Silkwood as well as an excerpt from Joseph Campbell's The Hero with a Thousand Faces, which talks about the hero who makes a difference, the Promethean hero who brings a boon to mankind but sacrifices his own well-being and life to do so. Students also juxtapose this with McMurphy in One Flew Over the Cuckoo's Nest, who gives his life to diminish the power of Big Nurse, and with Jesus or Joan of Arc. Instead of now thinking that Jerry, in The Chocolate War, should have just shut up and sold the chocolates, they come to see a certain value in resistance to evil, while in no way underestimating the terrible price to be paid for such resistance.

Choice of material is therefore as important as are LAPs and collaborative learning in the development of critical thinking.

In Summation

Processes such as those described above, enable students to connect "the known to the unknown, the personal to the public,"(4) and to see the relevance of school activities to their own lives as well as to the larger activities of living. In such a classroom, shaped by inquiry, discovery, and negotiation as well as by knowledge, students become active participants in the creation of a community of learning, a community based on the processes that encourage and develop critical thinking.

Footnotes

1. Chafee, John. Thinking Critically. Fourth Edition. Boston: Houghton Mifflin, 1994, p. 52.
2. Ibid.
3. Marrus, Michael R. The Holocaust in History. New York: Penguin Books, 1987, p. 51.
4. Kutz, Eleanor and Hepzibah Roskelly. An Unquiet Pedagogy. Portsmouth: Boynton/Cook, Heinemann, 1991, p. 250.

Biographical Note

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Faculty Development for Critical Thinking Across the Disciplines

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The Institute for Critical Thinking was established, six years ago, primarily as a faculty development program with critical thinking as a focus and general educational excellence as a goal. How can an Institute serve as a "catalyst for educational excellence" within Montclair State, a selective, comprehensive state college with an outstanding faculty involved in their own disciplines? Without serious enrollment problems to motivate the development of new areas of teaching responsibility, and without administrative pressure for extensive curriculum restructuring, there was little incentive for faculty to join, voluntarily, in an effort to design new general education courses in critical thinking, a common pattern at some other institutions interested in critical thinking. Nor did general principles of critical thinking seem, initially, to be able to offer insights into disciplinary practices that could be used in faculty members' own scholarly work or teaching. How, then, could a faculty development program be designed, in such a setting, toward the general mission of educational excellence, taking into account theoretical work in critical thinking and its implications for teaching and learning across the curriculum?

In order to involve as many faculty as possible in our work, we have reviewed and experimented with a number of different faculty development models. We have found, not surprisingly, that some faculty responded to invitations to participate in activities involving theory, some in activities involving considerations of pedagogy, etc. Some prefer to work with colleagues within their own academic domains; others prefer programs that are interdisciplinary in nature. Our most effective programs, we have found, have been those through which relationships between critical thinking and the language, methods of inquiry, and scholarly, rhetorical, and pedagogical practices in the various academic and professional disciplines are explored.

Few faculty at Montclair State, we have found, are interested in becoming "students" of critical thinking as a new and emerging discipline, with scholarly, rhetorical, and pedagogical roots in Philosophy. Although they attend lectures on topics in critical thinking that they perceive as valuable within their own disciplines, they prefer, by far, seminar settings in which their own disciplinary and pedagogical expertise is needed and valued as an integral part of the faculty development experience, and through which they can make a substantive contribution to the on-going inquiry. Thus, we have emphasized collegial, collaborative settings in which faculty explore critical thinking as an educational goal, from their own perspectives and experiences, as articulated within the specialized contexts of their own academic disciplines.

The Role of Critical Thinking in the College Curriculum

Critical thinking relates to teaching and learning in college in two central but distinguishable ways. First, critical thinking plays the role of an overarching educational ideal that speaks to the goals of undergraduate education. Such goals have been most carefully articulated, within the critical thinking community, by Harvey Siegel (1988), and can be summarized as leading students to an appreciation of the role of good reasons in their own thinking, both in the specialized contexts of their college courses, and with application to their future learning and to their roles as citizens. This has been generalized in terms of helping students to make reasonable judgments in their studies and their lives (Lipman, 1988). Second, lists of critical thinking skills and dispositions have been articulated as generic behavioral exemplars of the achievement of the overarching ideal in particular educational contexts. Robert Ennis (1987) and Richard Paul (1990) offer such lists; general recommendations for implementing critical thinking in pedagogical practice have also been presented.

How does critical thinking as an educational ideal and the specific recommendations of critical thinking theorists for educational practice relate to each other? Can faculty development result in the attainment of this ideal through these pedagogical recommendations, and if so, how? Given that courses in the various academic subjects are necessary for the accomplishment of the purpose of collegiate education, how can the specific dispositions and skills afforded in the general analysis of critical thinking be related to the practices within the several courses that a student takes? Practices in particular domains of undergraduate education are deeply embedded in the language and practices of the various disciplinary communities. These include skills and dispositions required for excellence within each domain (Weinstein, 1990). If we accept critical thinking as an overarching educational ideal, such practices are warranted as educational strategies to the extent that their development in undergraduate courses of instruction tends to the achievement of this ideal (Weinstein, 1990a). The task for faculty development, then, is to trace the complex connections among these various elements: What is the relationship between critical thinking as an educational ideal and other appropriate standards of excellence in undergraduate education? What sort of practices can best serve as effective means toward achieving these goals? How do the specific dispositions and skills identified in critical thinking theory and practice relate to the dispositions and skills, implicit or explicit, in the theory and practice in the various academic domains? How can competing conceptions of means and ends be negotiated through faculty development?

We maintain, with Lipman (1988), that such a variety of educational aims essentially involve a focus on the various kinds of criteria that apply to reasoned judgments, including the disposition to apply these criteria in a context-sensitive and self-correcting fashion. This, for us, offers a bridge between work such as Ennis' and Paul's and our own efforts at the Institute for Critical Thinking. The concern at the undergraduate level is the particular articulation of such skills as they apply to the various fields, that is, the formulation of the most adequate representation of the general skills in respect of the various subjects that students study.

The question for critical thinking across the disciplines is, thus, the translation of the critical thinking skills and dispositions identified by members of the critical think-

ing community into procedures that reflect the practices of good reasons assessment in the domains represented in undergraduate instruction. Good reasoning analysis in the various fields are as divergent as quantitative reasoning in physics and hermeneutic analysis in literature; and so we maintain that general sets of skills and dispositions need to be modified in light of the objectives and pedagogical strategies appropriate to courses in the disciplines (Weinstein, 1989). Members of the various disciplines, in collaboration with critical thinking specialists, we believe, can best accomplish the incorporation of critical thinking objectives into their courses, and can make important contributions to the field of critical thinking itself. In such collaborative efforts, general lists of critical thinking skills and objectives can be seen to offer suggestions for focused inquiry so as to uncover the analogues for these general skills and dispositions of relevance to the instructional aims of courses in the various domains. But in order for this to be accomplished a differentiable theoretic frame is required. Lipman's definition serves this purpose for us.

A Useful Definition of Critical Thinking

Matthew Lipman, sees critical thinking to involve: "*skillful, responsible thinking, that facilitates good judgment because it (a) relies on criteria, (b) is self-correcting, and (c) is sensitive to context*" (Lipman, 1988a, p. 3, italics in the original.). His account highlights six key elements in critical thinking.

(1) The requirement that critical thinking be *skillful thinking* connects with epistemological and other normatively relevant considerations of practice. Skillfulness points to the fact that critical thinking is embedded in contexts that furnish reliable information and warranted methodology. Critical thinking is not indifferent to the norms of the various fields, rather it looks to appropriate practice for the standards that have proved useful so far in supporting warranted inquiry of all sorts, and for the most reliable information from which inquiry draws its relevance and strength.

(2) *Responsible thinking* points to the relationship between the critical thinker and the community that he or she addresses. The critical thinker sees an obligation to present reasons in light of acceptable standards, or to challenge such standards by relevant and persuasive argument. Such reasons are subject to the judgment of competent members of fields relevant to the issues involved, and the critical thinking is obliged to address such members and reflect upon their judgments when making claims and presenting arguments and analysis.

(3) Through the focus on *judgment*, critical thinking is seen as directed towards nonroutine thinking, thinking that can not be adequately based on algorithms or other mechanical procedures. It is called for in those situations in which considerations must be weighed and alternatives assessed, situations that call for the assessment of priorities and determinations of truth and relevance.

(4) *Criteria* are the most decisive considerations appealed to in an instance of critical thinking. Criteria are those reasons that reflect the critical thinker's assessment of the essential factors to be taken into account when offering an analysis, or when supporting and challenging a claim. Lipman offers a number of examples that indicate what he has in mind by criteria; these include: "standards; laws, by-laws, regulations, charters, canons; ordinances, guidelines and directions; precepts, requirements, speci-

fications, stipulations, limits; conventions, norms, regularities, uniformities, covering generalizations; principles, assumptions, presuppositions, definitions; ideals, purposes, goals, aims, objectives; tests, credentials, experimental findings; methods, procedures, policies" (ibid., p. 4). A critical thinker, thus, is called upon to make the framework of her argument clear, and to make available to her interlocutors, the considerations that she takes as crucial to the inquiry in which she is engaged. Generally, the criteria appealed to reflect the central concepts and methods in the field or fields relevant to the inquiry at hand. But as we shall see immediately below, criteria are not taken as absolute, rather, they may be questioned, and changed or even replaced, as critical thinking progresses.

(5) *Self-correction* requires that thinkers use critical thinking processes as a method for exposing and correcting the procedures employed by the thinker herself. A critical thinker subjects the ongoing process to reflective scrutiny; both the substantive criteria employed and the procedural norms that characterize her reasoning are open to critique and reevaluation.

(6) *Sensitivity to context* points to an aspect of critical thinking that complements the appeal to general criteria. Sensitivity to context demands that the application of criteria to cases is scrutinized with an eye to the appropriateness of the criteria in use, and their possible modification, in light of the particulars of the situation that prompts the judgment. The critical thinker, thus, sees criteria in relation to the context of their application. The context determines the relevance of the plausibility of the criteria employed, and furnishes particular circumstances that may require specific alterations of the criteria when applied to the case at hand.

Examples of Programs of the Institute for Critical Thinking

Early research efforts of the Faculty Development/Resource and Dissemination Center had been devoted to literature searches in the various academic domains for material pertaining to critical thinking within the disciplines; however, little was found. The various faculty development efforts of the Institute Fellows Program and the Collegiate Seminars and Workshops Program, such as the Fellows' Roundtables, Inquiry Panels and the Summer Inquiry Workshops have all been attempts to accomplish the complex and detailed task of articulating the connections between critical thinking and the academic and professional disciplines. All of these, whatever else they may be, are forums that enable faculty to first identify issues that are centrally related to the objectives of education for reasoned judgment within their own scholarly domains.

The experience of introducing the concerns of critical thinking to those faculty who have been willing to study a new approach has, however, pointed to an available avenue for effective faculty development. Some faculty introduced to the ideal of critical thinking and to elements of its detailed articulations are motivated to find relevant analogues in their own practice. Faculty who reflect on the practices within their own discipline that promote reasoned judgment as an educational goal, identify elements of scholarship and teaching that are analogous to those articulated as critical thinking objectives. By supporting faculty efforts to define their own areas of interest and to use their own disciplinary frames and vocabulary, we permit faculty to take

ownership of critical thinking ideals and to see its relevance to their own fields.

Workshops and seminars have introduced the issues of critical thinking to faculty in a fashion that respects their own disciplinary perspectives. Although many of the forums are interdisciplinary, the emphasis is on concerns that grow out of problems in specific or related disciplines. The task, once the foundation constructed through these approaches has been firmly established, is to start to build bridges from the seminars into instructional practices--"subject matter pedagogy"--adequate to the educational ideal of critical thinking (Oxman, 1991). This has resulted in the articulation and rearticulation of general thinking skills and dispositions in terms of their structure as seen in and across various disciplines. The idea that a cross-disciplinary focus be added to courses, especially in general education, is thus supported. We are striving for instructional innovation that achieves a balanced integration of learning through critical thinking and the requirements of education in particular domains of inquiry.

Seminars have been held on topics as diverse as moral reasoning, literary theory, the use of graphic calculators in problem-solving, critical theories in literary analysis, the teaching of statistical reasoning, multicultural curricula, critical thinking in physics, and freshman composition. These examples reflect reasonable practice in various fields and across many related disciplines. The seminars enable faculty to identify central issues of concern to reasoned judgment in the language of their own disciplines and consonant with their own educational backgrounds in their areas of specialization. These approaches are integrated into classroom practice consistent with the individual styles of particular faculty members. Although there is little attempt to interfere with faculty members' preferred classroom styles, discussions of pedagogical issues in workshops and seminars result in increased faculty interaction, including visits to each other's classrooms and informal peer mentoring.

Teaching for critical thinking has been raised to a level of awareness that supports concern with institution-wide objectives such as faculty development, the development of a "New Student Experience," institutional assessment, and multiculturalism. It has played an essential role in Montclair's reconceptualization of its goals and purposes. Montclair State, moving towards university designation, now sees itself as a "comprehensive teaching university." This image is reflected in a newly articulated concern with supporting faculty to focus on teaching. Faculty may now select research into teaching as a strategy for promotion and tenure.

Critical thinking has played a significant role in Montclair's central emphasis on teacher education. Montclair now offers a Master in Education degree program with a concentration in critical thinking. As part of out participation in John Goodlad's "Agenda for Teacher Education in a Democracy," Montclair is helping to integrate critical thinking concepts and values into the understanding of the simultaneous renewal of schools and colleges (Michelli, 1991; Pines, 1991). Critical Thinking is at the center of our longstanding efforts to improve urban education (Oxman, 1984, 1991) and our collaboration with our school districts (Michelli, Pine, Oxman, W., 1990). Finally, the results of these efforts are the underpinnings for a continued theoretic attempt to integrate discipline-specific approaches with the general conceptions of critical thinking and to make this available to others through published articles, presentations at conferences, and workshops at other educational institutions, both at the college and pre-college levels. We see all of these to be a major contribution to the

emergent field of critical thinking itself and a major contribution to Montclair's vision of itself as a comprehensive teaching university.

As just mentioned, the Institute sees faculty development as including a significant outreach to the larger educational community. Through the publication of our journal *Inquiry: Critical Thinking Across the Disciplines*, conferences proceedings, and collection of articles on critical thinking with a variety of particular focuses, through our annual and special conferences and our participation at conferences elsewhere, and through a variety of programs for the pre-college community, Montclair faculty are able to see themselves as part of a national concern with critical thinking. Faculty from Montclair and other New Jersey colleges and universities receive and publish in our journal, *Inquiry*, which makes available to them the writings of their colleagues from around the country and abroad. Our conferences introduce our faculty, who both present and serve as session chairs, to the work of others, and enables them to present their work as well. We support our colleagues in presentations at professional conferences on critical thinking and in their fields. We organize faculty groups to support staff development efforts in schools in the area and bring our work to colleges across the United States and elsewhere.

In sum, during its six years of existence, the Institute has created a model of faculty development that reflects certain plausible principles and useful strategies. These include the articulation and promulgation of an overarching ideal; the specification of that ideal within disciplinary contexts; respect for special faculty expertise and individual style; self-selection of faculty; and participation of faculty with the larger community by bringing new ideas and alternative perspectives onto the campus, and by sponsoring forums through which faculty may reach out to colleagues elsewhere. All of these form essential strategies of the Institute for Critical Thinking's faculty development efforts, and may serve to inform faculty development efforts of many sorts.

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What is Critical Thinking?: Habermas and Bloom

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This paper is a report on an effort to build a bridge between some of Habermas' theoretical reflections, some ideas derived from psychoanalysis, and the practical work we do in the classroom. In doing this I will be, I realize, skipping some intermediate steps, namely the analysis of the present and historical structures of the educational system.

Let me begin with a brief look at Habermas. Basic to Habermas' thought is the idea that the Marxian presupposition that labor is the basic process of society needs to be revised and supplemented (Habermas, 1971).

Transformations of, and exchanges with, the material world in social cooperation and knowledge gained for the purpose of the instrumental manipulation of the world represent but one pole of the human project; on equal footing is the human effort to establish through communication, language, the interpersonal framework of human existence, the establishment of proper norms, and the development of the kind of knowledge which aims at interpersonal understanding and self-understanding. And just as Marx made the center of his critique of capitalism the unequal relations that arise in the process of labor, as seen against the ideal of cooperative labor, so Habermas directs his critique of the existing arrangements of society through the ideal of free public discussion. The ideal society is one where norms are formed on the basis of the free discourse of those whose lives would be affected by them. Habermas undertakes to give the precise conditions under which discourse can be characterized as free, therefore, the agreement resulting from it is unconstrained. Among other things, unconstrained consensus is the outcome of discourses wherein participation is unrestricted, where the opportunity to speak is equally distributed, and where the force of better argument, and not power, force, be it external force, or internal (e.g. neurotic fear) carries the day. Habermas calls the presence of these conditions the ideal speech situation. But, and here is the crucial point, all discourse is embedded in society, and the ideal speech situation implies an ideal society, one free from domination. To the extent that any speech situation suffers from the restricting influence of power it is systematically distorted; the task of a social theorist is not only to discover the traces of social domination in the communication and self-understanding of subjects suffering from its effects, but also, in a practical manner, to open dialogue and in dialogue enable the subject or subjects to discover for themselves the distorting influences hitherto operating. In this way, the practical project of liberation is tied to the theoretical project of understanding; what is more, in this new self-understanding the subject ratifies the initial theoretical claim that his communication had earlier been distorted; that it had been ideological rather than truthful. In a complex argument too detailed to set out here, Habermas demonstrates that there is implied, in every act of speaking, a search for truth. Without a proposition being open to questioning, and therefore to a discursive examination of its truth content, it would make no sense to propose anything. Thus, every act of speech implies a truth-searching situation, a search for a consensus based on rational agreement; in other words, the ideal speech situation. The

very act of speaking, for Habermas, demonstrates that human beings are in search of the ideal world of truth, and its "container," the ideal society. This, for him, is what makes discourses aimed at enlightenment, for oneself and others, possible.

Existing society, then is measured against the ideal, and modern capitalism is found wanting. Here is a society where the political intervention of the state manages the economy, yet the possibility of genuine discourse about the norms and goals of society is suppressed; the very workability of society is its mute justification. There is democracy in the formal sense, but genuine participation and will-formation in public discourse is curtailed. The public realm is depoliticized, and what Habermas calls "civil privatism" reigns: political abstinence combined with an orientation to career, leisure and consumption, and the self, which promotes the expectation of suitable rewards within the system: money, leisure, time , security.

In brief, Habermas proposes that communication is embedded in a social system which includes work and politics, and that can either be open and untrammeled and provide free access to all who wish to engage in debate, or it can be closed off; and as all human speech is situated, free speech would imply a free society. Where society is not free, communication itself can not be free. Where power imposes norms, be it in a family or in the larger society, communication is systematically distorted, systematically unfree. Because all human speech implies a striving for free discourse, it is possible to initiate discourses wherein the theorist takes as his goal the elimination of distorted ideas on part of the subject. At the end, the subject ratifies the initial claim of which he was not aware at the beginning: that his communication had been distorted. He then becomes freer to symbolize and think about his situation.

Let us look at the state of the educational system at the present time. We who deal with its products every day need not listen to the statistics; (I am also assuming that you have already heard those statistics that show its decline and I will not here repeat them). The students I teach are middle-class or working-class students, and thus I will leave the discussion of ghetto schools, an important topic in itself, to another speaker at another occasion. We can, for the time being leave out a discussion of elite schools and their products, but that still leaves us a large slice to deal with. Why do schools fail to provide a modicum of education, a modicum of the ability to handle ideas, on such a wide basis? We can not assume that each student of each school fails on her own; as a sociologist, one looks immediately to systemic considerations, and here, I believe, Habermas' notions are of great help.

If Habermas is correct, then the nature of modern capitalism requires that its own people, our own people, not be aware of the true nature of the system, that they not make claims on the society which could not be delivered within a system of private wealth-seeking supported by public monies (Habermas, 1975). It is required that instead of expressing, discussing and eventually democratically instituting different goals and a different distribution of rewards, people should want more of the same: privately consumable goods and leisure services. These rewards, which the system can produce at least for now, are the stuff that people ought to desire. Demands for a different society, for greater freedom at work, the dissolution of bureaucratic procedures, greater participation in public life and a whole host of similar agendas need to be kept out of the public earshot. Desires, as sociologists, and Habermas, understand them, are not givens, they are not purely private, they are what public agreements

allow to become desires; these then are inculcated or are selectively allowed to emerge in the developing human being. Needs, therefore, have a direct relation to discourse; to reorient needs, and discourse about needs, specification in language is necessary. This discourse requires a public arena and a vocabulary, a set of expressions that point to a new way of wanting, and new goals. This is precisely what an educational system would provide, a vocabulary, images of other lives, and the development of the ability to think reflectively and hypothetically. No wonder then, that the systematic repression of needs requires the truncation of the educational experience. This is especially necessary in a mass educational system; as long as few were educated education was for a self-chosen group who were anchored in, or were destined to join, a stratum whose world views, received through families or reinforced through economic and social connections, stably anchored them in an acceptable ethic in spite of the possibility of "climbing out" through words. With mass education, and the collapse or weakening of traditional value systems under the impact of industrialization, urbanization and mass migrations, it is all the more necessary that the education system be immunized, that it produce not a reflective human being but one who is closed by virtue of not having access to reading, reflection, a historical horizon, or authentic self-images. Thus, the educational system is doing precisely what it is supposed to do: turning out people who do not think and have little access to the thoughts of others. In this way, the democratic agenda is not overburdened with new demands.

But I believe that we must look even further if we are to appreciate the full import of the concept of systematic distortion of communication. After all, the educational system is but one link, and from the point of view of the biography of the individual, a rather late one, in the system of need-formation. We must look of course at the first locus of need-formation, the family.

Other considerations should also steer us to the family. We must ask the question: "OK, the kid can't handle ideas, I can see how one would consider that necessary for the system, but he can't spell, he can't do math either." These, after all, are skills the school does teach, and the system does need.

Here I would like to present to you some of the working hypotheses that I employ to understand this problem. I ask myself, and I ask the reader: "How is it possible for a student to sit through twelve years of education (by the time we get him) and not have learned or not to make use of the most elementary material to which they were exposed?" I would assume that this is possible only when the real person, the soul, if you will, is withdrawn, impermeable, asleep so that even repeated exposure to the same simple material does not make a dent and does not get through. In fact, I am assuming that there is an active withdrawal and the avoidance of contact. Therefore, I would like to make a distinction between two forms of ignorance that we encounter in the classroom, which I will call static and dynamic ignorance. Static ignorance comes from lack of previous exposure and it is the easier of the two to overcome; all that one needs to do is fill in the missing pieces of knowledge. The student shows interest or at least is willing to undergo the process, and assimilates the material into his/her existing framework of knowledge (if any.) Dynamic ignorance, on the other hand, is something different. Here, the student will actively avoid knowing; this activity will take the form of boredom, listlessness, excessive argumentation, cutting classes, etc. and, if all else fails, of the passive assimilation of the material and its treatment as an alien

incubus to be kept isolated from any existing framework of useful knowledge, and to be expelled, through forgetting, as quickly as possible so that the next time the material is encountered it is encountered as new. Dynamic ignorance, I would maintain, is the result of systematic distortion of the student's thinking process on his capability to respond to his needs and to others; its origin also includes a family situation where the person is systematically treated with indifference or in other ways that discourage free thought and feeling. The problem then presents itself in this framework: if a society is to privatize needs it must remove them from public discussion, through the crimping of the educational system, but it must do it through, so to speak, the "privatization" of people, the isolation of individuals in an emotional sense. Through the suppression of feelings, the privatized modes of consumption and of work are assured. From the point of view of the individual, educational and emotional life are casualties but from the point of view of the system, the failure of education and the shallowness of emotional life are necessary components of a process of systematically distorted communication, and are functional.

That such a fragmentation of the individual into an isolated atom and the suppression of emotional life are taking place in a wider context has been theorized by a number of authors. Here I will mention only a few relevant ideas. Lasch in his discussion of the narcissistic personality presents a picture of the family barely surviving in an anomic world; it is not an island, but in fact incorporates the shallowness of feeling of the outside world despite and against the best efforts of men and women to feel and to be intimate (Lasch, 1978). In his estimate, the detached, manipulative and unfeeling (or feeling only in a shallow way) personality of our time is the product of a kind of parenting which is incapable of intimacy, a flow of deep feeling, yet is attentive and makes a show of it. Children of such families are closed off and wary of human contact yet friendly on a superficial level, and seek approval from peers.

It is in this context that I see the connection between Habermas' critique and the work of Alan Bloom (Bloom, 1987).

It is easy to point to the radical differences between these two analyses of society: the widely divergent political perspectives, the different diagnoses and their differing prescriptions are obvious. Clearly, Bloom assumes a fallen world, where the serious pursuit of ideas is always the province of only a cloistered, virtuous few as against the Habermasian utopia of a democratic community of truth-seekers engaged in a discussion leading to self-discovery and through it, to the institution of the norms of a just society. Bloom's history is only a history of ideas, untainted by the institutional analysis of contemporary capitalism and its possible complicity in the corruption of academic life. Bloom's villains enter from the left of the political stage, and proceed to execute a patient already ailing from an overdose of relativistic ideas, while Habermas, though he recognizes the excesses of the left, places his hope in the pluralism of free discourse. Bloom looks toward an idealized past of free discussion among an elite of equals, and expects little of the world as it is, or is to be.

But what Bloom describes as having taken place even in the elite institutions of higher learning is precisely what Habermas' analysis would account for: the curious absence of feeling. This absence is pervasive, it is not primarily directed at the educational process; it characterizes, so the book portrays in detail, even the experience of sex, and of love. (Bloom questions the extent to which "relationships" still resemble

what used to be called falling in love). The passions of youth, once experienced with a bang and a sense of cosmic, dramatic force, which linked Eros and the quest for knowledge, and could therefore be counted on as fuel for the adolescent and post-adolescent search for truth, now are characterized by blandness, and a sense that they are but transitory and fleeting states. It is this generalized absence of force, of detachment, of tentativeness that makes it impossible to be seriously attached to ideas, to books, and it is this that forms the basis of Bloom's lament.

Martha Wolfenstein has drawn attention to this same process in her discussion of what she called "fun morality", a system of values that seeks experience and fun but scatters its emotional investment into many fleeting pleasantries (Wolfenstein, 1955). For a concrete image of the absence of strong feeling, witness the presentation of educational facts on Sesame Street: here letters are fun, woven into an eye-popping context of thrills, but empty of commitment or of sustained thought or fantasy. Contrast this, if you will, with the way in which reading used to be taught, through the recitation of sacred texts or moral maxims which bore the weight and emotional investment of a whole cultural tradition.

In short, I would maintain that through the operation of the family, feeling is clipped and crimped at the level of intimate relations, which in turn leads to the turning off of all passion and passionate thought, thus less of it is available for education. But this is not an alien system, it is part and parcel of a privatized way of life that crimps and clips political and other discourse.

I would hate to end with these clinical judgements, which would imply a finality, a circle that can not be broken, but I don't have to, because both in my own work and in the conclusions Habermas reaches there is hope. Habermas' hope hangs on the inherent project for truth in every speech act and, specifically at this historical juncture, on the moratorium that an education allows during which values and needs may indeed be examined and clarified in discourse, suspended as students are from the pressures of daily life and career. Habermas also views these developments as occurring within a cultural tradition which is capable increasingly of anchoring world views in norms arrived at in rational debate, and thereby making use of the potential for rationality inherent in the fact that we are speaking beings. My optimism is of a different kind, it is a more personal and not an historical optimism. The notion of distorted communication carries in it the seed of its own possible transcendence; there is, Habermas maintains, an orientation to truth, and self-determination. It is this quality that we work with as teachers and this is what makes it possible to gain the active cooperation of our students, even those who are dynamically ignorant.

Let me in closing illustrate with two brief but concrete examples how the above thoughts work themselves out in the lives of two students, and in my brief experience with them. I will talk about two styles of distortion: one style is frozen, ideological; the other will illustrate the newer, non-ideological mode of distorted thought which Habermas calls "fragmented consciousness" and which we can call confusion (Habermas, 1987). The student I wish to tell you about seemed in class to be a "worker," came to class regularly, took notes; he was neat and orderly; he did not do as well as we would have liked on the first test and came to see me. I asked about this and that, and in the process took a look at his notebook. What I saw was that each idea, almost each sentence, was separated from the next by an empty line, so that the notes gave the

appearance and sense not of a continuous story, but a run of oneliners, without beginning or end. This despite my repeated emphasis that each topic- heading tells a story and develops a point in a continuous fashion. I took the state of the notebook to be expressive of the way in which the student thinks: ideas, in separation, sit as though in a cemetery, each in its own grave, without movement. I asked what the student wanted to do, and he explained that he wanted to be a perfume salesman and work with his uncle. I asked what his father does; he a was a high-school teacher. In the course of our brief conversation the student twice said his father was an excess, when he meant to say he was a success. I then asked about his father if he ever explained things to him. He answered yes, but when I pursued the topic a little further it turned out that his father had not, he would either do the work for him if it was homework, or would talk around or beside the point. I formulated the following working hypothesis: this student has been systematically discouraged from asking questions; he was thinking of school material, all "real questions" as dead matter to be filed; thus he does not examine his life. The content of his thought is received, unexamined opinion. But this attitude does not occur in a vacuum. It is precisely this way of thinking, (thinking like everyone else, at least about social questions) that will enable him to be a salesman, to be someone who without questions shares the world of those in the business in which he sells. The distortion of thinking will be socially and economically useful for him, and for the society that has to fill in the slot of perfume salesman, if not with him then with someone else.

What is my task with this student? Simply put, to encourage dialogue both in and out of class. To encourage questions and to answer them and at some point, to call the student's attention to the way in which he separates his useful life from the "useless" knowledge he is acquiring. At the same time, I should not be taken in by the mechanical nature of his being a good student, of him swallowing the material, and I should not mistake his willingness to learn dates, definitions, and everything else dead, for real thinking. In fact, in the case of this student, opposition, argumentativeness, and even hostility to the subject or the professor, or any of the many forms of non-compliance, would be the first sign that real learning is about to take place. It is the hope that once that process of dialogue has begun, it will spin itself out, in sometimes accidental and unexpected ways, in the further career of the student, (although, realistically speaking, the small spark lit may also be extinguished by later developments.)

Let me tell you about another student I had a few semesters ago. He was very handsome young man with just enough of a punkish appearance to make him interesting. He lolled around, in terms of his physical posture; he began in the front of the class, and ended up in the back, but still made himself visible. One day he spoke about how boring one of the reading assignments was. He did not do well on the first test and came to see me. He told me he wanted to go into broadcasting, the production of TV commercials, that he liked the funny ones; like which one, I asked; like the Bud-light commercials. Which one is your favorite one? He told me it was one with a man asking for a light and getting a sword-light, like that one in Star Wars. In the ad, after getting real scared the man realizes that he should not just say light, but Bud-light. Before I speak about what this story lets us glimpse, a few words. Those not familiar with psychoanalytic hypothesis-forming will think it is hasty to sketch even a tentative picture of emotional life from a brief tale told, but let it be said that in no case

would one conclude anything on the basis of such a tale or even many of them; but that it is possible to formulate tentative ideas, which would then have to be checked out through painstaking, and long processes against the facts of the person's life and against his other mental productions. Yet, the story if taken seriously describes a theme, of a person who wants things light, easy, wants to be provided with a quick fix, yet finds himself in something more difficult and more cutting than what he bargained for. I would be making the initial assumption that this student's way in life is to want things easy, and to avoid having to bite into things, or to have to struggle with things, because he has been hurt early in life. (In fact, in a psychoanalytic framework one would say at the time he was totally dependent on others for sustenance, at the time he was an infant.) For such a person, quandaries, intellectual and otherwise, are to be side-stepped. With such an attitude, independent thinking is also very difficult. This mode of defense is not outside of our experience as teachers, it is widespread, and indeed, in the larger society forms one of the bulwarks of consumerism, of that modern attitude which looks at all tension as alien, to be immediately relieved or avoided. This mechanism, in its relation to thinking, serves not to keep any single item off the political agenda, but to preempt the discussion of all but the simplest and most optimistic of contents. In the classroom this expresses itself as a demand for the simplest, most "fun" materials and contents.

What is to be done then in the case of this student, and the many others like him, if we are to fulfill our function of educating in the genuine sense? It would seem to me that we have to "drive" this student, and to be somewhat impervious to his claims of being overtaxed. I say somewhat because I am aware of the fragility of some of the students that I teach and the fragility of their connection to any educational institution, and I do not want to drive them away in the name of educating them. Yet it is in my experience and thinking absolutely necessary to wade through the charges of "irrelevant," "can't do it," and to keep a firm eye on the real needs of the person we are educating.

What makes it so much harder to keep our eye on the real needs of the person is that part of our attention must be directed at the student opinion reports. The requirements of smooth administration dictate that students' real needs and their felt needs be equated. Thus, often students are treated as consumers of education, and not its product. The goal often becomes to please students on the basis of already formed needs, rather than the re-examination, reformation and re-kindling of needs. But it is only in initiating a re-examination of needs that we each can be true to the notion of understanding and only then can we engender genuine dialogue. We have to ally ourselves as teachers not only with the speaking person but also with the person he harbors, the person speaking through the tongue of systematically distorted communication.

In the end then I would maintain that critical thinking is not the product of one or another educational technique. It is made possible, and even necessary where genuine freedom in the expression of ideas is valued and permitted, where at least some parts of public and institutional life are built on truth and justice. Where such is the case, many institutions, including family life, engender truthful expression and wise judgement, in other words, critical thinking. In the absence of such a social framework, we have the current crisis of the schools. In the absence of such a framework, to think and

to speak truthfully require the courage to overcome difficulties rooted in one's own character and in reality. It would be our task as teachers to facilitate a classroom environment in which something similar to the therapeutic process can occur: through our actions and words a kind of "holding environment" can be created in which the attention, the interest, the seriousness of purpose, the commitment to ideas, and the human kindness of the instructor and that of fellow students facilitate an atmosphere which counteracts the real world and in which dialogue can once again be resumed. It is our hope that the critical thinking so incubated will then assume more of a presence in our students' lives.

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Global Origins of U.S. Society: Manhattan College's Multidisciplinary Course: Its Inception, Its Syllabus, The Burdens of Its Success

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This paper is part advertisement, part blueprint for Manhattan College's now three-year old multidisciplinary course called Global Origins of U.S. Society. Global Origins is a companion piece, a requirement developed to be taken by students in the School of Arts, who must also take a course called Classical Origins of Western Culture. Its aim is to give students a chance to study groups, as well as outstanding individuals; to look at the recent American past, as well as the much more distant Classical one; and to be introduced to the words and deeds of women and people of color, as well as those of white men. Although Global Origins covers European immigrant groups in America, it also provides case studies of the Asians, Africans, Latin Americans, and Native Americans who make up the U.S. population. Like Classical Origins, Global Origins has students reading literary and historical texts, but it also introduces to them the perspective of sociology, so that they may use the categories of race, class, gender, and ethnicity as a set of lenses through which to view events and people.

Global Origins came into being, not by administrative fiat, but through the efforts of a group of concerned faculty who wanted to make sure that the College's new core curriculum would indeed honor its avowed committment to global perspectives. There were five of us (each from a different discipline) who met informally over an eighteen-month period to work out goals, a framework, and a syllabus. After the school's Curriculum Committee okayed the course, the group's informal leader, feminist theologian Judith Plaskow, was given a course reduction to do more reading and to plan a two-week summer seminar for interested faculty.

The seminar worked out remarkably well. Fourteen faculty from the departments of History, English, Government, Sociology and Anthropology, Modern Foreign Languages, and Religious Studies made up our group. We read through the syllabus, discarding what we didn't think would work and also taking spontaneous suggestions from the floor for readings and videos that had not previously been considered. As we came to readings in the syllabus from different disciplines, the experts in each field would give their perspective and suggest how to conduct a class on the material. A number of the afternoons were devoted to screening videos.

I've often asked myself why the seminar participants all got along so well. Faculty egos can be formidable, and one-upsmanship is an occupational hazard in our business, but for this group, mutual respect was the order of the day. Certainly our belief in the value of the course bolstered our *esprit de corps*. Perhaps, too, our realization that the course foregrounded the struggles and triumphs of everyday people, rather than the accomplishments of powerful individuals, made us humble. It may well be that our respect for our subjects made us behave like them.

And so in the fall of 1991, the course became a reality. It is probably no surprise

that Manhattan's students, who are twenty-five per cent minority, about fifty per cent female, and almost a hundred per cent Roman Catholic are interested in learning about themselves and their ancestors in this course. However, since Global Origins is not simply a celebration of America's diversity, but rather a hard look at the often harsh treatment of minority groups by members of the dominant culture, students do not accept everything that they learn passively. Some are disturbed at what they find out; some are defensive; some are grateful—very few are untouched by the experience.

In fact, about a week ago a young man in my Global section for this semester stuck his head in my office after class and said, "Things got a little heated today." And they had, as we discussed discrimination against African-Americans after viewing a *Prime Time Live* segment called "True Colors." I can't imagine a student making a similar comment to a teacher of Classical Origins of Western Culture—it's too far removed. This does not mean that Manhattan students do not like Classical Origins; they like it very much—probably more than they like Global Origins—they *like* Classical Origins, but it *moves* them less.

The intense nature of the Global course makes for interesting assignments and lively class discussions. One short paper asks students to do a little research into how and why their families came to the U.S. and to tell a piece of immigrant family lore. Another asks them to write an essay called "How I Got to Manhattan College," using categories of race, class, ethnicity, and gender to help explain their choice. They come away from this particular assignment realizing that free will had less to do with their decisions than they thought and that a sociologist might well have predicted the outcome.

Class discussons often proceed from log questions, responded to in blue books at the beginning of the hour. A favorite of mine, when we are discussing stereotypes, is to have the students guess what a man named Guido Calabresi does for a living. I tell them he is a real person. They unfailingly guess he's in the construction business, or runs a pizza parlor, or works for the mafia. They laugh as they make their guesses; they laugh more when I tell them he's the Dean of Yale Law School (and now a nominee to the bench of the federal circuit court). The discussion takes off from there. Another good log question, when we've finished the readings on race, ethnicity, class, and gender, is to ask them whether they'd rather be a black lawyer or a white plumber, and why. The answers are fascinating and often heartbreaking, ranging from "The plumber—I couldn't take the abuse of being black" to "The lawyer—because I think education gives you the power to change things."

Exams for the course contain at least two essays, often asking students to analyze certain real-life situations. The one that follows repeats an actual exchange between two Manhattan College students that occurred a few years ago:

> Martha, a Dominican-American engineering student, is a member of the Latina Engineers Society. Her friend Anthony jokes with her that he feels left out and is going to form the Italian Male Engineers Club. "Go ahead," says Martha, "but what would you talk about?"

Students are asked to discuss why membership in such a club is a joke to Anthony, but of real importance to Martha. In their answers they consider Latino culture, gender

discrimination, networking, and immigrant movement into the American mainstream. They do a good job.

Because of its perceived value, Global Origins now faces a new challenge. The Administration would like the course to go college-wide into the Education, Engineering, Business, and Science Schools. We can't staff such an expansion with our present cadre of teachers. What to do? Not everyone has the scholarly background, the interest, or the sensibility to teach Global Origins. In truth, those of us who have had the experience feel very protective of the course. My own hope is that we will expand slowly, adding qualified professors and small segments of the College population in measured increments.

I'd like to think that Global Origins, like all good courses, does more than simply interest our students. I hope that it changes them, opens them up, broadens their perspective. I do know, for certain, of one person who has been deeply affected by the course, and that is myself. I look at my students differently now—whites and minorities—and realize the difficulties they face: living with discrimination and reverse discrimination, adjusting to the changes in their society, learning to grasp the power that is now (or is still) within their reach. I also read different kinds of articles in the newspaper now: I find myself fascinated by immigration stories, and I brood over the wisdom of Native Americans opening up gambling casinos on their reservations. Now, too, I write different kinds of scholarly essays, often based on the readings from the course: I find *MELUS* (Multi-Ethnic Literature in the United States) one of my favorite journals. I even give money to different kinds of charities now, like the American Indian Tribal College Fund and the Inner City Scholarship Fund—organizations that I would not have paid much attention to or understood the successes of, before I taught the course. If Global Origins moves our students even a tenth as much as it has moved me, it has more than accomplished its goal.

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VALUES AND DIVERSITY: TOWARDS A CRITICAL MULTICULTURALISM

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I. Political and Intellectual Hegemony

The political control and exploitation of non-Western societies practiced during the past two centuries under the European policies of colonialism have come to be universally acknowledged as unjust and have been largely abandoned. But in recent years concern has been raised about an intellectual analogy of colonialism said to be taking place within Western nations, namely, the practice of imposing through the educational system the Western values of the majority and of the ruling elites on all members of those societies, including members of minority cultures within the societies. Such intellectual practices are viewed as being morally problematic, as are the political practices of colonialism. Intellectual hegemony is no more acceptable than political hegemony. Critics of these practices have proposed instead that education should proceed under policies of multiculturalism, that is, policies which teach the values of all of the cultures comprising society. The call, more specifically, is for liberal arts and core curricula to be structured in such a way as to recognize the diversity of values characteristic of the diversity of cultural traditions, both in the world at large and within Western nations.

In this paper, we seek to reflect in a general way on the nature and the value of such calls for multiculturalism. Should the calls for multiculturalism be heeded, and if so to what extent and in what respect? Ultimately we will defend the claims of a qualified form of multiculturalism, which we refer to as critical multiculturalism, and we will criticize the alternative, namely, uncritical multiculturalism. We will refer to the practice of teaching exclusively Western values, the practice the multiculturalists oppose, as monoculturalism.

What are the reasons one could offer to oppose monoculturalism? The first and most obvious reason, the one following from the analogy between political and intellectual hegemony, is that each culture has a right to have its own values presented, analogous to the right of political participation or self-determination denied by colonialism. A second reason is that Western intellectual values themselves oppose monoculturalism, since these values prescribe that we constantly seek out the broadest range of human experiences and beliefs, that we never rest intellectually content with what we have been taught or what we now believe.

The heart of our argument is that, though each of these reasons requires that other cultural values be considered along with Western values, neither of them implies that the other values should be taken at face value. In fact, each of these reasons implies that the other values not be taken at face value. This is easiest to show in the case of the second reason, which is that Western intellectual values themselves oppose

monoculturalism. Western intellectual values, while prescribing that other values be considered, require that those other values be compared and contrasted with the values that have already been taken into account, in a word, that the new values be critically examined.

It is more difficult to show that the first reason, the reason rejecting monoculturalism on the grounds that other cultures have a right to have their values considered, implies that those values should not be taken at face value. But this is the case, because a culture's right to have its values considered is a right of engagement. The nature of the consideration owed to another culture's values is not unthinking, knee-jerk acceptance, but serious critical attention. The right of consideration is a right to be taken seriously. Mere acceptance absent critical attention would be patronizing, and so would not be treating the other culture's values, or members of that other culture, with respect. For example, a complaint frequently voiced is that in many cases ethnic studies programs on college campuses amount to a ghettoization of the cultures those programs represent. The establishment of those programs is seen as a mere acceptance of the other cultural values without serious engagement, since, though the programs exist, they are not taken seriously by the rest of the campus. To the extent that such things are true, this would amount to a violation of the right of consideration. Because the right of consideration which other cultures possess is a right of engagement, a right to be taken seriously, the values of the other cultures cannot be taken at face value—they must be compared and contrasted with other values.

What does it mean that the values of other cultures not be taken at face value? It means that they be subject to the same critical scrutiny that Western values are themselves subject to. They must be examined in terms of such criteria as coherence, consistency, and fidelity to human experience, and be rejected or modified to the extent that they come up short. The attention they receive must be critical attention. Hence, we refer to the type of multiculturalism we recommend as critical multiculturalism.

Some defenders of multiculturalism would reject our claim that the values of other cultures should be subject to critical attention, on the grounds that this is simply a covert way of reimposing Western intellectual hegemony. They would argue that such critical attention amounts to the imposition of Western methodological values, the Western concept of critical reason, a concept that may not be part of the values of other cultures. (Of course, this objection is a criticism, and thus seems tacitly to affirm the Western methodological values it explicitly rejects, but we will let this point pass.) There seems to be merit in this objection, until it is recognized that the serious attention other cultures' values are owed includes attention to their methodological values as well. Just as the substance of Western values has altered in creative engagement with the substance of other cultures' values, Western methodological values have altered in engagement with the methodological values of other cultures. Western critical method is no longer strictly the method of Plato's Academy, the method of Cartesian dualism, or the method of scientific positivism.

The general point is that a university or college is a community, a community of learning, and a community is characterized and distinguished by the intellectual interaction of its members. To accept some group for membership in that community is not simply to tolerate them and their ideas but to engage them. Here is where the

analogy between colonialism and monoculturalism breaks down. The moral unacceptability of colonialism lies in the colonialist's failure to allow the self-determination of the colony. The colony, after all, is its own community separate from the colonial power. But within a community, the moral situation is different. The monoculturalist's moral shortcoming is a failure to treat those who are in fact members of his/her intellectual community as members of that community. What other cultures are owed within a community is not self-determination (which would be a denial of community, a rupture in community), but participation, what was earlier characterized as the right to be taken seriously.

We all know that it is egocentric, ethnocentric, dogmatic, and just plain small-minded to assume that one's own values are superior to another simply because they are one's own. The relativist assumes any interpersonal and intercultural comparison and judgment of the merits of different value systems and practices to be impossible on the grounds that comparison and judgment are only possible from within one of those value systems. Any judgment about the practices of another culture becomes dogmatic ethnocentrism and cultural imperialism. The view we are calling "uncritical multicuturalism" is defended by its proponents on the grounds that they believe the only alternative to dogmatism and hegemony is to take the values of other cultures at face value. The very same arguments are made at the intracultural level about different value systems among the subcultures which comprise any "multicultural society." The relativism is the same, as is the false dichotomy underlying it, that when values and moral judgments conflict, our only courses of action are domination or uncritical acceptance. While uncritical multiculturalism is relativistic and monoculturalism is dogmatic, critical multiculturalism avoids both errors.

II. Multiculturalism Without Relativism

Ethical and conceptual relativism are not new views in the West. They have their roots in the rhetorical works of the classical Greek sophists, Protagoras and Gorgias, although relativism has resurfaced in recent years as a response to monoculturalism.

Philosophy teachers since Socrates have been complaining about the recent decline in our students' ability to engage in reasoning about moral problems. Philosophy courses at the introductory level almost always aim to enhance students' critical thinking skills, and very often work on moral reasoning skills in particular. These skills are typically honed by reading works such as Plato's Euthyphro, Apology, Crito, Protagoras, or Republic. These remain in the curriculum in part because of their historical content (they contain the origins of so much of the discipline of philosophy and at least some of western intellectual culture more generally) and in part because there are significant questions raised and examined in a sustained, rigorous dialogue, where one of the central messages lies in the interlocutors' attempts to sort out the difference between well-supported, cogently argued beliefs and beliefs for which a person does not have a carefully reasoned justification.

In the Euthyphro, Socrates meets Euthyphro outside the court of Athens, where Socrates has come to answer charges that he has corrupted the youth of Athens by teaching what we now call critical thinking skills, and Euthyphro has come to prosecute his own father for something that appears to be only partially his fault. Socrates

is taken aback by the confidence Euthyphro must have in his own ability to distinguish right from wrong and piety from impiety, so Socrates ironically seizes the occasion to learn from Euthyphro's answers to his questions. With each question Euthyphro disabuses himself of ill-supported assumptions, and the reader sees increasingly the need for him to shed his smug, dismissive attitude toward the issues.

At one point, for example, when discussing the nature of piety, Socrates asks Euthyphro to stop giving him examples of pious actions and to instead explain to him what it is about actions that makes them pious when they are pious. Euthyphro responds by asserting that pious actions are those actions which are pleasing to the gods. Socrates then asks whether the actions are pleasing to the gods because they are pious or pious because they are pleasing to the gods. The question is one many think originated western moral theory.

If the answer is that pious actions are pious because they are pleasing to the gods, then Euthyphro's account has a problem. The gods in the Greek pantheon have been known to disagree about these things. What is pleasing to one angers another. Hence, the same action is pious (pleasing to the gods) and impious (angers the gods). If the same action turns out to be both pious and impious, then Euthyphro has not provided a way to distinguish piety from impiety.

The other horn of Euthyphro's dilemma comes with the response that pious actions are pleasing to the gods because they are pious (rather than them being pious because they are pleasing to the gods). In this case, Euthyphro owes us an independent account of what it is about an action that makes it pious (independent of its god-pleasingness). If the gods are pleased by an action because it is pious, the obvious question is "Then what makes it pious? What are its piety-making characteristics?"

We want to return a bit later to an analogous dilemma confronting the relativist or uncritical multiculturalist.

Moral theorists, unlike moralists, are concerned mainly with what they call "right-making characteristics." Their main question is the question of what all "right" actions have in common, that is, of what it is about an action that makes it right when it is right and wrong when it is wrong. Students typically approach such questions with dismissiveness and ill-developed analytic skills for two very different reasons. One group implicitly adopts a kind of moral dogmatism, and the other a form of moral relativism. Dogmatists believe that there are answers to all moral questions in some particular moral codes etched in stone somewhere, and that the only work of moral reasoning is to apply those commandments or whatever to this or that particular situation. Dogmatists usually think someone else knows the answer — a priest, Jimmy Swaggart, a rabbi, or some ethics committee somewhere. The problem young dogmatists have is not figuring out what the right thing to do is, it is figuring out why someone should want to do the right thing, or convincing others that what someone else "just knows" to be right really is. Persuasion would be easier if one could <u>give reasons</u>. Relativists, on the other hand, believe that what a person or group of people think is right is right for that reason, that a person or group of people think it is right. Morality, then, is really a matter of opinion or even taste, so if a line of questioning gets too complicated, we can always end the analysis by saying "well, it is right for me," or "us," or "it's just a matter of opinion," or "we can agree to disagree," or any number of other thought-ending remarks.

Most beginning college students and older monoculturalists and uncritical multiculturalists believe either dogmatism or relativism, and you can probably tell that we think that believing one or the other of these must be true is a false dichotomy, that there is some better, third alternative. Sure. And it is moral theory, two and a half millennia worth of it. Moral theory involves reasoning from general principles to particular cases, but also involves analyzing and defending these principles, as well as weighing conflicting principles. The "virtue ethics" of Plato and Aristotle, the utilitarianism of Bentham and Mill, and the rights-based theories of Kant are all still around and advocated in various forms today. Utilitarians think the morally relevant features of an action are its consequences. Kantians think that an agent's intentions (and the duties derived from the nature of those beings who have moral standing) determine an action's rightness and wrongness. The Aristotelians focus their analysis on the kind of person and character traits from which actions emanate. But the problem of relativism is that, like dogmatism, it is usually a mind-numbing skepticism about the need for moral reasoning, and, from this infertile ground, well-developed moral reasoning skills and critical versions of multiculturalism will not very likely emerge. Skepticism can be very useful in philosophy, but it needs to be reasoned skepticism, which this is usually not. To get students to apply skepticism in a fruitful way requires overcoming the resistance to engage in reasoning about the details.

We like to confront resistance head-on, so we sometimes discuss relativism in our classes. The sources of these beliefs interest us. Many students confuse being tolerant of others with not making moral judgments about the behavior of others. Many confuse the fact that it is often difficult or impossible to figure out the right thing to do in a given situation with the claim that there is no right answer, so any answer is as good as any other. Many confuse the belief that your individual conscience ought to guide your behavior with the claim that whatever you think is right is right ("for you"). Many confuse the fact that different cultures have different beliefs about what is wrong with the claim that nothing is really wrong for all cultures. Many confuse "He believes x" with "x is true for him."

Allan Garfinkel, a philosopher who teaches somewhere in California, has been known to end these discussions with his students by declaring "Relativism isn't true for me." Tempting as this response is, it doesn't always "catch" psychologically. It seems to students, strangely enough, consistent with their relativism, so it often fails to create the discomfort it should. It is worth pointing out that we don't behave in ways consistent with the belief that morality is just a matter of opinion (we give reasons, justifications, etc., for moral beliefs, which we wouldn't do if we really thought such things were simply a matter of taste. I can perhaps explain my preference for, say, chocolate over vanilla, but I could never justify it in the sense that I would give someone else a reason to believe or act as I do). We point out the thinness of claims such as "Nazism and slavery are wrong from our point of view." Or: "Molesting children was right for him." A true or false question: Is it a fact that there is suffering and oppression in the world? Tolerance, as we all know, can be oppressive, and even when it is not, being tolerant does not imply that moral judgments have no foundation.

Uncritical forms of relativism and multiculturalism present problems at different levels: the need for moral reasoning is often not felt until one examines its foundations, and the reasoning skills a student may possess in other areas are not brought to

bear in this one, so those skills are not engaged, developed, and integrated. We frequently meet students whose reasoning skills in mathematics and science are quite sophisticated, but are unable to do the equivalent of adding two and two in reasoning about morality. Understanding the sources and symptoms of those patterns of thought can certainly help make their content an object for critical reflection.

Nothing is more effective in helping someone question a belief than showing that person the belief directly contradicts some other cherished belief. This is where We recommend adopting a discussion strategy suggested by the philosopher Bernard Williams. Williams points out that relativists commonly hold two different beliefs. Try this with your students. Ask them how many of them believe:

1. Terms like "right" and "wrong" can only make sense as a shorthand for "right-for-a particular culture" or "wrong-for-a-particular society."

2. It is wrong for one culture or society to judge, condemn, or interfere with the practices and beliefs of another culture or society.

Proposition (1) is a semantic thesis, one which asserts something about the meaning of terms of moral evaluation. The claim is that morally evaluative terms have no meaning apart from their use in a particular culture, that what they mean is relative to what a culture believes they mean. What makes an action right is that a culture believes it to be right, and apart from what particular societies believe to be "right" and "wrong," the terms have no meaning.

We think the attractiveness of this proposition comes in large part from a confusion about expressions such as "x is right for them." One proposition expressed by this sentence is "For people in their situation, it is right to do x," but another, very different one is "they believe x to be right." Relativists and uncritical multiculturalists believe that "they believe x to be right" implies "For people in their situation, it is right to do x." Anyone who believes a society can be collectively mistaken in their moral beliefs (about, for example, infanticide, ethnic cleansing, slavery, torturing people, female circumcision, etc.) will, of course, doubt the soundness of such an inference.

Proposition (2) is a substantive moral principle, an assertion about what it is wrong for a group of people to do. There are at least two cultural influences at work in this sweeping principle of tolerance. One is an overcompensation for a long history of ethnocentrism, colonialism, and cultural hegemony. The other is that our students have watched the television show "Star Trek," where this principle of noninterference was elevated to the status of "The Prime Directive." (As anyone who has ever watched the show has noticed, the prime directive is invoked only when it is about to be violated, and the grounds for overriding it usually consist in enumerating the ways that the culture which has been contacted has a conception of right and wrong different from the "U.S.(S.) Enterprise." To be fair, the "Next Generation" appears more committed to the relativism of the 1990's.)

A surprising number of people believe that (2) follows from (1). It would be remarkable if someone could derive a substantive moral principle from a semantic thesis, and it is interesting to point out why the meaning of words generally do not imply that any particular course of action is right. Instead of dwelling on this now, suffice it

to say that even if we agree on a definition, we still need to demonstrate that a course of action falls under that definition, and this will require controversial premises linking (1) to (2).

Now, why does Bernard Williams call the adoption of (1) and (2) "vulgar" relativism, and what exactly is the contradiction involved in holding both of these propositions? The key to seeing the contradiction is to notice that adherents of (2) usually assert (when asked) that the principle is something which applies to any culture, not simply our own. And this is the catch. If (2) means that it would be wrong for any culture to interfere with another, then it is meant to apply universally. But (1) is an assertion that there are no principles which apply universally, so (2) employs a sense of "wrong" which, according to (1), is meaningless. The central tenet of relativism and uncritical multiculturalism is that right and wrong are relative to a culture, so to assert a principle as true of all cultures, independently of whether or not they believe (2), is a contradiction. (1) says "no nonrelative wrongs," and (2) says, "here's one."

The first question to raise at this point is "If there are universals, why only this one?" Why not add "Torturing small children for fun is wrong," or any number of other plausible candidates?

The next question to raise may anticipate the response many of you must be thinking. Why not restrict (2) to "us"? It would be wrong for us to interfere with others, but just fine for others to interfere with us? Asked sarcastically, the question sounds rhetorical. I'm not above such tactics. But reductio ad absurdum arguments are dangerous in philosophy because you never know when someone will embrace the conclusion you think is absurd. So let us recall Euthyphro's dilemma and look at the analogous set of problems it raises for the relativist and uncritical multiculturalist.

If what makes an act wrong is that people believe it is wrong, then in a society in which people disagree about what is wrong, we need to figure out where to look to find out what "society believes," or else the disagreement will imply that the exact same action will be both wrong and not wrong. Do we look at the laws of that society? If so, there could not be "wrong laws," a profoundly conservative position which will be unattractive to most relativists and uncritical multiculturalists. Perhaps we look to what the majority thinks is wrong? Again, couldn't the majority be mistaken? Isn't this why we sometimes change not only laws but also our beliefs? If there is no adequate answer to this horn of the dilemma, the relativist's and uncritical multiculturalist's appeal to "what society thinks" has not provided a way to distinguish right from wrong, or provided the characteristics of what make wrong actions wrong when they are wrong.

So now we become impaled on the other horn of the dilemma. If, by rejecting (1) and defending (2), the relativist claims that there are sometimes grounds for criticizing another culture, then he or she may concede that the reason a group believes something to be wrong may be that it is wrong, and that the group's beliefs are correct. If so, then we have begun to raise the need for analyzing what it is about the wrong action that makes it wrong. That a group believes it to be so will not do. That is, we need an account, independent of what cultures happen to believe, of wrong-making characteristics, and in this route lies the beginnings of theorizing about morality.

When confronted with two contradictory beliefs, even only slightly rational people

struggle to reject one or the other (or both) of those beliefs. If you have students or colleagues who are not inclined to do this, our advice is to give up there and then. Go home. Or talk about something else. Uncritical multiculturalists do have other interesting things to say. There are, of course, several interesting responses to the particular charge of inconsistency we have raised, ways of trying rethink versions of (1) and (2) which are consistent. We shall not pursue them here. Our point is that by making the relativism of the uncritical multiculturalists an object of their reasoning, relativism becomes less of an obstacle to their reasoning.

The ancient Greek origins of relativism, dogmatism, and the Socratic and other responses to them suggest an important, non-dogmatic reason for retaining in an expanded canon elements of the Western philosophical tradition while confronting the implications of the thought of other cultures. One need not adopt the moral theory of Plato or anyone else in particular to theorize about morality, and one need not be an uncritical multiculturalist to find merit in engaging the values of other cultures. But accepting the values of other cultures at face value is refusing to take them seriously. It is a violation of their right to be engaged in intellectual exchange and hence a tacit denial of anything but token membership in the academic community. Adopting the relativism inherent in uncritical multiculturalism amounts to a patronizing lack of respect for other cultures and the legitimate goals of multiculturalism.

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CULTURAL ENCOUNTERS: INTERDISCIPLINARY FACULTY DEVELOPMENT FOR AN INTERCULTURAL CORE CURRICULUM

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In 1992, St. Lawrence received grants from the Fund for the Improvement of Post-Secondary Education and the Andrew Mellon Foundation to develop an intercultural core curriculum that would build on our interdisciplinary, residentially based First-Year Program and give substance to our commitment to "international education." This paper will use our experiences in the two years of our faculty seminar and in curriculum development to reflect on the challenges and rewards of interdisciplinary work.

The Faculty Development Seminar

The proposal for the Cultural Encounters Program included a quote from Patrick J. Hill on the attributes of a faculty with a multicultural perspective, who have:

> mastered or at least internalized a feeling for more than one culture. They know the value and indeed the necessity of seeking many and diverse perspectives, most particularly the inevitable partiality of those perspectives...They have mastered the skills in understanding and integrating these diverse perspectives. They are comfortable with ambiguity and conflict. Tolerance, emphatic understanding, awareness, of one's own partiality, openness to growth through dialogue in pluralistic communities -- all of these have become part of their instinctive responses...(p.45)

The goal of the proposed project is to gather an interdisciplinary group of faculty at our small liberal arts college to develop a set of new courses in intercultural studies. Through a three year faculty development seminar, consisting of intensive reading, writing and discussion, combined with field experience in Kenya and India, the group would work to incorporate such a perspective into their intellectual and pedagogical perspective. What became immediately apparent as seventeen faculty from twelve disciplines gathered for the first seminar meeting was that we needed to develop disciplinary openness, tolerance and understanding of each other's methodological, theoretical, even political perspectives as we developed such knowledge about and openness to cultures outside of the western world.

The project is organized into three sections which correspond to the sequence of three courses that will come out of the seminar. The first section is entitled "Conceiving the World," concerned with the ways cultures come to understand their world, for example, through foundation myths. Part II, "Cultural Encounters," investigates the encounters, exchanges, as well as coercive relationships that occurred between west and non-west. The third part will be an attempt to synthesize the broad knowledge, to re-examine material and theoretical structures, to integrate the lessons of cultures

from the west and the non-west into a vision for the future, or at least to raise questions useful for that goal.

The selection process brought together colleagues from anthropology, art history, biology, economics, English and French literature, geology, government, history, music, philosophy and religious studies. Several of these individuals also take part in interdisciplinary programs in African, Asian and Gender Studies as well as SLU's First-Year Program. Conflict emerged from the start. Although the major focus of contention was over which texts to use, a fundamental question arose about the definitions and divisions of our subject matter. Beginning in their applications, several participants objected to the use of the terms "West" and "Non-West," arguing that such terminology privileged Europe and North America by relegating the rest of the world to a position of negativity. In addition, the simplistic designation of the "non-west" lumps together such diverse continents, to say nothing of cultures, outside of the western world that it is intellectually useless for our purposes; therefore, some argued we had to redefine the terms before we could proceed.

This debate continued into the discussion of the readings, the structure, and the procedures of the seminar. The project proposal designates texts from the Enlightenment as the basis for the examination of western culture; foundation or creation texts represent "non-western" cultures. These choices, some contended, sabotaged the project from the start, casting non-western cultures as the eternal primitive; others objected to the omission, reflecting a liberal bias, of western religious texts, in particular the Bible. Procedure came next: just how many "cultures" did we propose to study? Further, would we just read the Sun-Jara, a West African foundation narrative without first reading background on the culture, practices, organization of the society from which it came? An opposing view countered that the group could draw on its internal experts for background but the project's purpose was not to develop expertise in every area we studied. Finally, there was a debate emerging between what the modernists and the post-modernists, those who argued that our examination of culture must be empirically based and those who urged that the challenges to conceptual categories raised by post-structural theorists be incorporated into the framework of our discussions. A related dispute began over the question of gender, some seeing it as a fundamental category of cultural analysis which must be central to our concerns, other viewed the study of gender as transcended by the study of culture, that preoccupation with it would distract from our goals. There was also a group of faculty who sat as if at a tennis match, watching and sometimes flinching at the lobs.

Several issues were at play here. One was simply the process of adjustment central to bringing a diverse group together to work on such a project; we needed time to adapt to each others' personalities, styles, politics. Another issue was process. A few of the members had participated in writing the project proposal; most had not. It was inevitable, indeed necessary in my view, that the latter group claim ownership of the project and that meant challenging and, in some cases, changing parts of it, parts which could very well be dear to those who had proposed it. An central part of our debates, however, can be attributed to the interdisciplinary nature of our seminar. The barriers between disciplines, methodological as well as theoretical, had to be acknowledged as well as confronted for our endeavor to go forward. What is most interesting for me, however, is the fact that division and disputes occurred within as well as across

disciplinary lines. Also, the dividing line on many issues is not exclusively between the humanities and the hard sciences. Debates over a relativist versus universalist approach to cultural studies confuses, happily if not pleasantly, expectations.

The seminar first met in mid-autumn, 1992 and the plan was to spend three weeks of the following summer in Kenya. Discord renewed itself. Some charged that the trip was dilettantism of the worst kind; what, beyond a tourist's view, could we possibly gain from such a short stay? Others argued that we would be better served by observing the "Other" in the poverty-stricken countryside surrounding our rural campus. The validity of the field experience was upheld by those who noted that we expect the students who will take the Cultural Encounters track to enroll in a SLU abroad program, one of which is in Kenya. We would also have the opportunity to challenge our intellectual perceptions with the reality of the multicultural society that composes the state of Kenya. A particularly difficult debate developed over the planning of the trip. Our two African colleagues quarreled bitterly over whether the trip should include homestays in the rural areas or be confined to seminars in Nairobi with university and government personnel; charges of elitism and primitivism flew. Finally, there were those who were wondering if they really wanted to spend three weeks in an African country with this group of people.

We agreed to prepare for the trip with a week of intensive reading and seminar discussion -- three-hour sessions, meeting twice a day. The readings were selected by two of the participants from the African Studies program and the seminar was scheduled for the week of final exams. I do not think I exaggerate when I say that we all approached this week with trepidation. But after a few tense and difficult sessions, something happened. We began to function as an intellectual collective. The debates remained, fortunately. But we debated in shared language. Certainly, many of the previous sessions had been very successful but often they were dissatisfying because the divisions were so deep. Now the session took on the atmosphere of the exchanges we hope to foster in our classrooms, the point-counter-point that furthers consideration of the issues rather than circulates into a stalemate. Why did this occur and at this particular point? The discussion was clearly more focused, concerned as it was with a specific country and the reading selection was superb. But I also believe that we benefitted from the hard work of forging an interdisciplinary seminar. We could not have taken so much from that one week if we had not prepared ourselves though our heated exchanges, our inter and transdisciplinary quarrels. We had learned how to listen to each other, how to draw on each others' strengths' while acknowledging our differences.

The trip to Kenya was a learning experience. We combined very productive seminars with Kenyan intellectuals - university professors, feminist leaders, city planners -with individual homestays in Nairobi, in a rural, high population area and on the Swahili island of Lamu. One experience among many demonstrates the benefits of our interdisciplinary group. The city planners took us to the edge of the Nairobi slums to visit the so-called informal sector, known as jua kali or "hot sun." There, groups of men work in the open air with hand tools to transform scrap metal into cook pots, steamer trunks, all sorts of hardware that is then sold outside of government regulation. The heat, smells, sounds, sights of the outdoor workshops were fascinating; as we talked to these artisans, we generated different reactions that we later shared. Some

focused on the material side of the production process, others on its social implications. Our musician and our philosopher drew our attention to the sensual aspect of the jua kali. Some were overwhelmingly depressed by the poverty; others optimistically buoyed by the activity. Certainly many stereotypes of "Africa" were shattered in that visit and it remains a touchstone for our discussion.

We have learned much from our experience in the seminar and in the field. We began this semester, in the "Cultural Encounters" Section of the project, with a reading list formulated through consensus, which we began to organize in Kenya and which we continue to modify freely as we go. The field trip has caused us to examine ourselves, our personal beliefs and biases but also our approaches to knowledge. As a group, we cannot, and do not wish to claim that we "know" Kenya, but we have begun to learn how to learn about other cultures; now we must transmit this knowledge to our students. But the benefits we gained from the field experience came not just from our visit to Kenya but from all of our work the preceding year. Drawing together as a group in our seminar has been a difficult but productive process. We have learned about each others' disciplines, shared and debated methodology and theory. Yet we are not an uncritically "happy family;" disputes and disagreements continue. We have all read Foucault, some will never like him. In fact, the debate between modernist and post-modernist perspectives is the most contentious issue we face, the question of how to conduct our inquiry in the third phase, the synthetic phase of our project. Still, we face it with much common ground, hard won but substantial. We have begun a successful culture encounter among ourselves.

Theoretical Directions

What we have learned from our faculty seminar is that interdisciplinary communication has all of the formal qualities, and difficulties, and perils of intercultural communication. While the content of our seminar has been cultural encounter, the interactions within and between cultures, we have found that the form of our discourse is impeded by disciplinary boundaries. As cultures, academic disciplines are entirely too discrete, and suffer from isolationism and disciplinary xenophobia.

We have to take very seriously where all of this leaves our students. Interdisciplinary, intercultural educational designs are the only ones adequate for representing the world to our students for their critical reflection and for preparing them to live in it. Interculturalism is the defining quality of our world; intellectually, politically, and existentially, we and our students make our way in a world where the necessity of working through and across differences is perhaps what we have most in common. We are not suggesting that this has never been the case before or for others, but that it is very acutely the case for our students.

If this is our condition, if this is how we see our work, what do we posit as our goals? That is, if the purpose of liberal education now becomes developing in our students the capacity to recognize and understand difference, to navigate interculturalism intellectually, politically, and existentially, then what are we trying to do in our curricular and pedagogical choices that will foster this?

To help our students navigate interculturalism intellectually, we need curricula and pedagogy which foster an understanding of difference. Surely, exploring the social and historical roots of difference is critical. What I would add is that a compara-

tive understanding of how gender, generational, economic, and social differences are socially constructed over time within cultures might help students understand themselves and others. As importantly, this kind of comparative, interdisciplinary inquiry promises to develop in students the general insight that differences, wherever they find them, are socially constructed, that they are not inherent, static, or immutable, and that to understand the differences is to understand the dynamic of their construction.

To help our students navigate interculturalism politically, we need curricula and pedagogy which map out the channels and hazards of relativism. Often the first effect of coming to understand difference as socially constructed is to see all differences as ethically or politically legitimate. The thinking goes that since differences are all accidents of particular histories we cannot affirm any one perspective as being a ground for judgment more solid than any other. Our perspective is not privileged since it too is simply the result of an accidental history. And the perspective of others is as legitimate - which is to say groundless - as our own. Thus the link in contemporary rhetoric between multiculturalism and tolerance. The link is deeply incoherent, but we can't develop that critique here. Rather, we simply want to point out how much is at stake in how we work through the issue of tolerance. On the one hand, tolerance based upon the appreciation of difference is a value central to living successfully and harmoniously in an intercultural world. On the other hand, a commitment to tolerance can lead to, and often does for our students, a deep incapacity to engage in ethical criticism or judgment. This is tantamount to political paralysis, where nothing is intolerable. The task for us, as educators and persons who are ourselves sorting through these issues, is to work on relativism seriously enough to reinvent the possibility of politics. We want neither easy judgments uncritically read off our particular histories nor a principled commitment not to judge.

To help our students navigate interculturalism existentially, we need curricula and pedagogy which enable them to develop an aesthetic of variety. If difference and complexity are seen as sources of confusion, conflict, dissonance, or even ugliness, than interculturalism is a source of anxiety to be avoided. Nationalism, identity politics, and other separatisms result. The problem is that these strategies all posit possibilities of uniformity or commonality that are misrepresentative of reality. It is important to recognize ourselves and others as thoroughly multiple. We each belong simultaneously to many cultures, many discourse communities. In every case then, to identify oneself exclusively with any one culture - white or black, Baptist or Buddhist, man or woman - is to deny one's own multiplicity. This can't but cause cognitive and emotional dissonance and some degree of self-alienation if not self-loathing.

To be comfortable with and take pleasure in difference, within oneself and without, is to be able to make a different kind of meaning, a meaning born of the capacity to see the making of self as a life-long project of weaving together threads borrowed from others different than oneself, into a tapestry that changes, becomes more complex, over time. This is, decidedly, an integrationist ethic, an ethic of multiple and reciprocal appropriations.

This is the interculturalism we would posit as desirable. Negotiation, transformation, and conflict are all inherent in this model, because the yoking together of different qualities, in a self or a community, cannot come about without critical choice and

accommodation. But, then, equipping students to understand and engage in this process is a primary task of contemporary higher education.

Curriculum Development

As noted above, the Cultural Encounters Program will include a core of three levels of courses on culture, as well as a year of foreign language and a semester abroad. The conception of these courses is deeply influenced by our reading of contemporary critiques of ethnography, some of which might be labeled post-modern. But one of the key influences on our sense of how to approach the topic of culture has been Eric Wolf's Europe and the People Without History, which we read in an earlier version of our project, under the AAC Cultural Legacies Project. In his preface, Wolf writes:

> this book strives to cross the lines of demarcation that separate the various human disciplines from one another, and to abrogate the boundaries between Western and non-Western history. It was written in the belief that a better understanding of our human condition is now within our grasp. (x)

Wolf's detailed historical demonstration that cultures are not static, organic, autonomous entities which were only contaminated by European imperialism, but rather constantly evolving, shifting, and multiplicitous, is one of the fundamental assumptions of our course content. That is one reason why we have chosen not to identify courses by specific geographical or national entities, as many core curricula do. As the title of our project suggests, we are concerned with getting students to reflect self-consciously on the nature of cultural interaction, especially within and between their own culture and others.

Another major element in our paradigm is that each of our courses should include study of the west as well as the non-west. This is related to Wolf's argument that no culture exists in isolation, but rather that cultures are created out of a history of interactions over time. But it also developed out of national political debates about the canon and multiculturalism. Although the media's representations of curricular debates sensationalizes the issues, faculty are often polarized by opposing moral and educational visions. The group identified as conservative, á la Allan Bloom, wants to maintain what has been constructed over the past century as the tradition of Western Culture. As Martin Bernal has argued convincingly in Black Athena, we are creating revisionary narratives in seeing Greece as the origin ex nihilo of European and hence American culture. The other groups on campuses, who see themselves as progressive, argue for adding new perspectives to the curriculum, especially those of the Third World. At SLU we added a graduation requirement in Non-Western or Third World culture about five years ago. Such requirements are often defined in terms of victimized groups and added to the curriculum with a kind of sanctimonious moral consciousness. Thus they remain reified, defined by their marginality or victim status, hence perpetuating the configuration of the world as most people in the West (and many in the post-colonial non-west) now perceive it: the industrialized, wealthy, advanced nations of Europe and North America versus the underdeveloped, organic, traditional nations of the third world.

Another of our pedagogical and ethical commitments is evident in this design. Whereas many courses on the third world rely heavily on western scholarly accounts

to convey their subject matter, we are determined to use the voices of the people we are studying as much as possible. This concern was foregrounded in our faculty seminar when we discussed Clifford Geertz's "Balinese Cockfight." Many of us were troubled by the absence of Balinese voices and interpretations in the essay. The possibility of objective knowledge about cultures is a contested issue within our group, but I think we all agree that particularly our phase one course must try to construct meaning out of a particular cultural practice by allowing as many voices as possible to speak, both in the texts under study and among the students in the class as well. We have also decided that each of our courses will place aspects of European or N. American culture in conversation with perspectives from other cultures. In an effort to evade the dichotomy of center vs. margin implied by the terminology available to us in "west" and "non-west", we will represent the "west" in our courses, not monolithically, but through very specific times and places, for example 19th century Britain.

In addition to a theoretical synthesis, we must also develop curricular goals and a pedagogy for the program. As a group the Cultural Encounters faculty has barely begun to reflect on or commit ourselves to specific pedagogical practices. About half of us who have been active in St.Lawrence's First Year Program, bring a rich background in collaborating and reflecting on teaching practices in the context of a multidisciplinary, team-taught core course. The CE program is designed to follow up on the FYP, to provide students through the senior year with core courses that will encourage the development of critical thinking, self-reflective and integrated learning. Nonetheless, it is an open question whether the pedagogy we use in the FYP, stressing discussion, small group work, writing workshops, and oral presentations, should pervade the ideal curriculum to the exclusion of traditional lecture methods.

The CE faculty are agreed upon the importance of writing as a means of connecting the students' academic learning through books, lectures, films, etc. with their selves, their values and attitudes. In this respect, the pedagogy of the faculty seminar links up most closely with what we are trying to do in our courses. In the faculty seminar, writing has been used in various modes--keeping minutes, writing goals statements--but its most successful use was connected to the field study trip to Kenya. We all kept journals which included both "field notes" and personal reflections. At our final meeting in Kenya on June 20, we agreed to write a 5-10 page essay by Aug. 1, quite a commitment for a group of faculty who had already used up a month of their summer and who all felt the pressure of their own research, not to mention families. We decided that the essays would analyze or explain the impact of the field experience on our ourselves---our values, preconceptions, identities; would narrate paradigmatic moments, and would reevaluate some aspect of our disciplinary knowledge. At our Aug. 19th meeting we broke up into groups and each group read and discussed three essays. The value of writing these essays based on our journal observations for each of us as individuals and collectively will certainly inform our teaching practices in the Cultural Encounters courses.

Our two lower-level courses are designed to approach the study of cultures in two different modes. The first course, subtitled "Conceiving the World," takes a theme or issue, such as nature, initiation, death, food, gender, etc. and approaches it comparatively in three to five cultures, one of which must be western. Rather than claiming to teach students Hindu or Maasai culture, we are focusing rather narrowly on specific

practices, but setting them within their larger cultural context. This method has more in common with what is now called Cultural Studies than with traditional cultural anthropology. We are not for the most part trained to teach about kinship systems and rituals and make no pretense of doing so.

The phase two class is the one which embodies most clearly the title of our project-Cultural Encounters. Whereas the phase one course examines cultures separately but comparatively, this one will analyze the effects of cultures interacting historically. For example, as you can see from your handouts, next semester we are offering two pilot courses, one on fundamentalism and one on the museum as a site of cultural encounter. One issue that relates to the phase two courses that we have not yet dealt with in our seminar is the relationship between American multiculturalism and global interculturalism. To this end, we have decided that we would like to see students in our second Cultural Encounters course develop a set of questions and a format for the journal they will keep when they go on a study abroad program. When they return they will enroll in our senior seminar and the journal will be used as the raw material for papers and research projects in the seminar.

The phase three course will be an integrative senior seminar that will draw together a group of students from various abroad programs and ask them to use that experience to reflect on larger theoretical and political questions about cultural relativism, human rights, or development issues, for example. Currently students who have been abroad often feel frustrated because they have undergone a transformative experience, and they have no outlet for using it in their academic work. Also they come back with unformed impressions, often romanticizing the cultures they have visited. The senior seminar will challenge them to analyze those experiences critically and to push themselves toward some personal commitments vis-a-vis diversity or interculturalism, so they do not rest comfortably with the mere pleasures or pains of the experience, but integrate it into their lives as citizens and/or scholars.

Conclusion

This section will be brief because we have just begun the implementation of our project. Much work remains to be done, from a continuation of our theoretical investigations and debates to a refinement of the curriculum. What can be said at this point is that the Cultural Encounters faculty have committed themselves to the challenge of an interdisciplinary approach to intercultural studies. While perhaps not yet instinctively, the faculty are engaged with the issues of ambiguity and conflict in the study of cultures, their interactions and interrelations. As we encounter difference in our discipline and in each other, we strengthen our capability to introduce these questions to our students. The Cultural Encounters program has initiated the means for both faculty and curricular development in intercultural studies.

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The Global Curriculum and A Parochial Critical Focus: A Need for Revision

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The question of avoiding the super-imposition of a mono-cultural critical focus over a multi-cultural curriculum and the need for a revision of the critical canon has been the subject of current research and discussion for over a decade. For example, at the Congresses of the International Comparative Literature Association, the scope of Comparative Literature has been moving from the Mediterranean world to the global world. At the same time, the critical focus for literature is being re-considered for revision especially in terms of genres, topics, movements, aesthetic ideas, and critical principles for analysis and interpretation. Such examinations are also taking place in other disciplines such as History, Economics, Philosophy, Medicine, and Sciences etc. The purpose of such a re-examination is to "de-hellenize" approaches to global studies. Consequently, the curricular scope in the disciplines is becoming expanded from a traditional Western cultural experience to a multi-cultural global experience.

This communication is limited to the examination of (1) the incidence to the genesis of a global outreach in curriculum; (2) the study of Great Books among World Classics, both Western and non-Western, primarily in the General Education Core Curriculum, and required and elective courses in Comparative World Literature; and (3) approaches to the multi-cultural critical focus that has evolved through research and classroom testing.

Secondly, this communication filters some of the generalizations derived from a decade of international conference experiences on developing an integrated critical focus for multi-cultural world literature. Since Great Books in World Literature, both sacred and secular, have shaped multi-cultural World civilizations and molded cultural experiences, they can be viewed as providing the roots for the phenomenon of the flowering of a multi-cultural society in the USA in the recent century. Consequently, it appears that the critical focus that has evolved at international conferences to examine the multi-cultural World Literature would be helpful in current discussions to examine a multi-cultural national literature, or a multi-cultural aesthetic expression in general.

The Twentieth Century has witnessed many revolutionary changes in all literary areas, making it necessary to extend the scope of traditional Western (e.g. Euro-centered) curriculum from this side of the Mediterranean and Urals to a multi-cultural, cross-cultural global matrix. Though the pressures for a global outreach in curriculum development were generated by world events beyond the control of independent nations, institutions have attempted to meet these demands by developing a global approach to the disciplines. Initially, this approach was relegated to innovative administrative units like Area Studies, or Regional Studies (Asian, African, Latin American Studies, SWANA or South West Asian and North African Studies, Eastern Europe and Northern Eurasian studies). These strategies were adopted primarily to overcome

the initial reluctance of the traditional discipline departments to engage in experimental approaches to non-Western studies. However, with the growth of specialization in regional studies and more maturity of understanding in the departments, the world studies are progressively integrated into traditional departments. It is not unusual in the 90's to see History Departments hiring a specialist in Asian History, or Latin American History, or Philosophy Departments hiring a specialist in Chinese and Japanese Philosophy, or Art Departments hiring a specialist in Asian Art.

Some of the forces and pressures prompting the extension of curriculum to a global extent are: The establishment of the United Nations with its three councils (Security, Social Economic and Cultural, and Trusteeship), the World Court, the Secretariat, and a series of subsidiary agencies. Among these agencies, UNESCO has contributed in a major way in expanding the humanities curriculum in general by its several projects, and above all, the 'Major Project for Mutual Appreciation of Culture Values of East and West, 1956.' Under this project several World Classics were translated from the Western tradition into Non-Western languages, and many of the great books from Non-Western traditions were translated into Western languages. Selected universities were encouraged to expand their curricular scope to a global extent and prepare teaching and critical material in those areas. In recent decades, UNESCO has supported the transcription of Literature without letters in oral transmission into scriptal literary structure, making them available for study, especially African epics and Central Asian epics.[1]

The establishment of the Nobel Foundation in Sweden and the awarding of Nobel Prizes started in 1901 in five areas: Physics, Chemistry, Physiology or Medicine, Literature, and Peace. Subsequently, in 1969 the Nobel Memorial Prize in Economics was instituted. This recognition of superior achievements in disciplinary studies, though initially limited to European culture experience, has been re-focused to transcend national, regional, and cultural barriers to include a global experience.[2]

The expansion of international trade, commerce, and banking have effected the world-wide political economy, and ideological duelling and military interventions world-wide resulted in a global job market, and world-wide diplomatic, consular and military activities. At the same time, there were troops of wandering scholars engaged in research in regional and world studies, for which research funds were made available. Administrative secretariats of international organizations and multi-national corporations were looking for qualified or experienced human resources. These international actions and involvements cumulatively demanded the need to know something minimally at least of the multi-cultural global societies, their ways of thinking and ways of living, to be able to deal with them.

In recent years there are forces compelling us to think globally, especially the Karma consequences of industrialization (such as industrial pollution, nuclear radiation from explosions or accidents etc.), global transportation and accidents, spreading epidemic diseases, space explorations, satellite communications, electronic media - all these have placed nations, far and wide in close proximity contemporaneously, shrinking global space and time into the cliche of the "global village in space."

The Anomaly of the Critical Canon.

Revolutionary changes in this century have helped to shape academic studies and

disciplinary curriculum to a global extent, packaging a cumulative multi-cultural global experience. While the curriculum had in earlier centuries progressively expanded from nation to region, it is now expanding to world-wide cultures. On the other hand, the critical canon to analyze and interpret this multicultural experience, has, to great extent, remained restricted to a mono-cultural or parochial framework. This anomaly in the expansion of disciplinary curriculum and the fossilized state of the critical canon, especially in interpretations, value judgements, or in legislating standards of taste, has necessitated the urgency of what some critics have referred to as the process of "de-colonizing the mind," as a corollary to de-hellenizing global studies. Because often the process in the classroom or in the critical appraisal in the discipline amounts to superimposing ethnocentric frames of reference, or simply superimposing Western (Euro-centric) critical ideas, values, and standards of taste on non-Western culture experience.

The need to revise the critical canon to be co-extensive with the expanded curriculum has been experimented upon in a number of instances. For the purpose of this paper, and essentially to limit the discussion, examples in teaching Great Books in World Classics in a General Education Core, and Comparative World Literature Courses are taken up. In these instances, modifications in the critical canon have been experimentally tested in the classrooms and presented at workshops and conferences, and finally adopted and integrated. In this process, two central difficulties have been experienced, and often times they are not easily overcome, (1) patterns of thought, dualistic as against unitive; and (2) a cultural world view in contra-distinction to a scientific or astronomical and evolutionary world view.

Dualistic Patterns of Thought.

We are exposed, oriented, trained, or conditioned to take contraries as absolutes, giving rise to a simplistic approach of 'Either-or.' If one is right, the other is inevitably wrong; if one is true, the other is inevitably false; if one is good, the other is inevitably evil. If the cultural primordial categories are patterned in such a dualistic frame of reference, the highest good opposed to the highest evil, the general thought patterns become thinly colored by such contraries, consciously or unconsciously. A good example is the notorious cliche of the mid-century of either the Communist or Capitalist ideology, or the suggestion of an "Evil Empire" depending on who says it, Iran, the USA, or China, and thereby opposing one's own self-certified "Righteous Republic."

Though such contentious duality is centrally operative in the frame of reference in some cultures, e.g. Western, some others traditional and long standing Asiatic cultures are not so structured on this contentious duality, but seek an underlying unity in plurality, such as the Upanishadic "Unity in Diversity," [anekantavada], or "Truth is One, perceptions are many" (e.g. seeing a mountain, or five blind men seeing the elephant), or "Unity of Idea, plurality of expressions" (system of governing), or even ways of life and modalities of religion. This accommodative principle somehow reduces the contending duality as two of the possible means to an end, or two of the possible modes of perception.

Western culture is not devoid of such unitive frames of reference. We carry the

quarter silver dollar in our purse or pocket and handle it almost every day without being consciously overtaken by the haloed Vergilian dictum, e pluribus unum. Our general frame of thought reference still remains grooved in a dualistic diamond, if one is right, then the other is wrong. This becomes catastrophic while moving from a mono-cultural to a multicultural curriculum with almost unconscious, if not conscious, resistance to the so perceived "wrong" curriculum material! Similarly, the adherents of the "right" mono-cultural critical cannon invariably oppose, the injection of the "wrong" critical canon operative in other cultures, but would rather subordinate other cultural expression to a mono-cultural or a Western-centric canon and value judgments. This resistance needs to be overcome by some kind of "academic ecumenism".[3]

In a multicultural nation or multicultural world, the assertion of a mono-cultural attitude as right, true, and good, and, to say it in the current vocabulary, perfect P.C., or "politically correct," over all other cultural groups in the nation, or all other cultural societies in the world, automatically renders non-P.C. communities and societies, and nations as being wrong, false, and evil. The unity of the multi-cultural nation or the unity of a multi-cultural global society could not be established on such a dualistic frame of reference, but can only be achieved, and, in fact, sought to be achieved under the frame of mind of unity in diversity, or e pluribus unum. Academics involved in shaping the attitudes and ways of thinking for the 21st century need to sharpen the focus in the curriculum to condition the thinking and attitudes of the current generation to the principle of unitive and accommodative patterns.

The second difficulty is to overcome the limitations of the mono-cultural cosmos and worldview operating in a culture. The primordial categories in a culture that enclose the cultural space and circumscribe the world view are in the nature of "Approximations to Truth" based on mythic and symbolic bridges to the unknown. They reconcile the individual with the Universal, establishing perimeters of faith and a belief system. Such primordial categories, enclosing the "cultural envelope" as Northrop Frye calls it,[4] are Powers Above, Powers Below, the Beginning, and the End, and the purpose and nature of the human condition. Every culture attempts to explain these unknowables in categories of empirical images or in visionary logic, enclosing as it were a "Mystery," necessarily true in faith (e.g. creation of the world, of first woman-man, the problem of knowledge, evil, redemption, etc.). These are explained through different social modalities in different societies. Yet they can be seen as archetypes in as much as they answer human anxiety and the "need to know the unknowable," but are diverse in their translation into anthropomorphic images or unitary monistic images such as Tao or Brahman, both of which are similar to later day Spinoza's metaphysical substance, or Einstein's singularity in astrophysics.

Consequently, while literature from different cultural experiences could be analyzed as such under the essential characteristics of literary genre, the interpretation of such literature needs to be in relation to a cultural cosmos or worldview, and the value system and ideals sustained in the particular culture. For example, the nature of the action that Helena takes against Bertram, claiming the fundamental right to be pregnant and have the child (All's Well That Ends Well) in renaissance European

Christian society, is similar to the action taken by Tamar against Judah, son of Jacob, who claims a similar right to the child in 9th century B.C. semitic society in Judaea (Genesis 38). Yet the significance of these two actions needs to be interpreted in relation to the cosmos and value system of the respective societies. To super-impose one over the other, or to super-impose a 20th century, post-Machiavellian, post-Falstaffian, post-Freudian, post-Darwinian, point of view or value judgment would be a failure to appreciate the nature of the action.

Similarly the nature of the "Heroic action" in world epics in multi-cultural societies could be mis-read if it is not interpreted in relation to the cultural cosmos or world view, and the value system and ideals of the particular society. For example, Beowulf going to battle with the dragon in Part III and facing certain death, is conditioned by the value of the heroic action and the expectancy of the vision of Valkure and the Norse Teutonic culture cosmos and world view. Similarly, Diomedes wounding Aphrodite in battle to bleed godly blood, ichor, and piercing the belly of Ares (God of War) with his spear, and dispatching the godly opponent bellowing out of the battlefield, are actions that are considered heroic and not sacrilegious. They make Diomedes a fearless warrior able to achieve 'aristeia' [excellence], in the battlefield (Iliad, V) against the background of the Hellenic cosmos and world view. Other examples of heroic action in epic narratives, Arjuna duelling with Siva disguised as Kirata in Mahabharata III, or Jacob duelling with Yehweh in the disguise of a stranger (Genesis, 32), need to be interpreted according to the specific cosmos and value systems operative in each society, without super-imposing one over the other, or 20th century 'Western' values.

Teaching about multi-foliate and multi-cultural, global societies in several disciplinary modes has, in turn, generated some difficulties. First, pre-Christian, non-Judaic European, and non-Western Great Books and Literature that were composed within the organic experience of different cultural orientations under a different culture cosmos, were simply subjected to later day 'Western' critical frame works and Judeo-Christian value judgments. In the 19th century, with the revival of the interest in pre-Christian European literature (e.g. Celtic Revival, Teutonic Revival, Finno Ugric Revival), and a fresh approach to Hellenic culture beyond European 'Greece' in anatolian states has led 20th century critics to a new enlightenment. There was a growing recognition of the multi-cultural nature of the European literature emerging in different sectors. At the same time, from the opposition of Asian and African scholars at the national and international conferences, it soon became evident that the critical focus in the disciplines remained somewhat parochial (i.e. Eurocentric) and there was a need to revise and extended it to be equally co-extensive with the expanded global curriculum.

For this purpose encouragement was given for research into the critical principles and aesthetic and cultural ideas determining value judgments within the culture cosmos operating in non-Western literary traditions. The objective was to evaluate and select some of the significant elements in non-Western literary traditions so as to be able to integrate them with the Western critical focus, thus making the revised, integrated, critical canon global in scope.

To further this objective, a number of scholars who have a specialization in significant Asian literary traditions of long historical continuity, such as the Indian, Chinese,

and Japanese, have presented after classroom testing, some of the basic critical ideas in aesthetic composition (comparable to or different from mimesis (imitation, dualistic), katharsis (purgation, redemptive), that are operative in non-Western literary traditions. Among such ideas are some that have been experimentally adopted: namely darshana (creative vision, transcendental) rasa (balancing of emotions, unitive), yugen (operative energy in between action and no-action as aesthetic delight), etc. Presently, these ideas are being integrated with the evolving revision to the critical canon for world literature. This process of filtering central aesthetic and critical ideas from non-Western traditions is still an on-going process.[5]

In an ecumenical age we should be able to accept or tolerate, the possibility of elements of Truth underlying diverse world views and the possibility of a plurality of interpretations of literature. When literature is regarded as a global discipline, though expressed in a plurality of languages, of times and milieus, we should be able to accommodate a plurality of interpretations according to the culture cosmos and world view. The attitude of the monopoly of Truth in one particular modality, we are told by the guru of the Greeks, Plato, only heightens the intolerance of the people of the cave[6]. Hopefully, we are dwellers in the open plains, having broken the chains, and are able to see the broad light of diversity and the larger reality. The accommodation of the multi-cultural curriculum requires such movement from the cave of the mind, and the re-conceptualization of both the multi-cultural curriculum and critical canon appropriate to it.

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* Paper presented at III Annual Conference of Inter-disciplinary Curriculum, General Education, and Liberal Learning, The Institute for the Study of Post-Secondary Pedagogy, School of Education, College at New Paltz, State University of New York, Lake Mohonk, NY Nov. 10-12, 1993.

ENDNOTES

[1]African epics: The Mwindo Epic (Bantu), edited ant trans. Daniel Biebuyck and Kahombo C. Mateene, University of California Press, Berkeley, 1971; Emperor Shaka, The Great (Zulu), trans. Mazisi Kunene, Heinemann Educational Books, London, 1979; The Epic of Son-Jara [Sundiata, earlier alternate transliteration], (Mali), text by Fa-Digi Sisoko, Notes and Trans. John Williams Johnson, Indiana University Press, Bloomington, 1992. For Central Asian Epics, Manas (Kirghiz), Apamysh (Uzbek) and others see Oral Epics of Central Asia by Nora K. Chadwick & Victor Zhirmunsky, Cambridge University Press, Cambridge, England, 1969. Oghuz epic Dede Korkut (Turkish), tr. Faruk Sumer, Ahmet E. Uysal, and Warren S. Walker, University of Texas Press, Austin and London, 1972. Armenian epic, Sassna Dzurer, tr. Daredevils of Sassoun by Leon Surmelian, George Allen & Unwin Ltd., London, 1966. Georgian epic, Vep'khistqaosani by Shota Rustaveli, tr. The Lord of the Panther Skin, State University of New York, Albany, 1977.

[2]When considering the award of Nobel Prize for Literature for 1913, a majority of members of the Nobel Committee of Swedish Academy opposed the nomination of Rabindranath Tagore, on the ground that he was not an European. It was the Swedish poet Verner von Heidenstam, with a prophetic vision, who saw the need to interpret Nobel's will and the language of the bequest of prizes to mean disciplines in a global culture, and not simply limited to a parochial European experience. Single handedly he persuaded the members of the Nobel Committee to consider the poet and his poetry and not his nationality. Since then, the Nobel Foundation, in spite of acute opposition, has generally succeeded in maintaining, to its credit, the vision of global disciplines.

[3]Such unitive patterns of thought are not foreign to dualistic cultural traditions, e.g. The Voice in the Burning Bush tells Moses in a profound tautological statement: I am who I am (Exodus, 3:14, 6:2-3), and continues, I am known by other names to other people at other times, in other places [El Shaddai, El Elyon, Yehweh, YHWH]. Or Jesus: In my Father's house, there are many mansions (John 14:2). Or the Voice of Allaha to Mohammed, "For every nation We have appointed a divine Law, and a traced-out a Way," (Koran, 5:48). These frames of mind for unity in plurality are not emphasized but somewhat submerged under the over-riding dualistic frame of reference, of either-or.

[4]Northrop Frye points out that post-christianized European Literature has operated under the mythological universe of "approximations" to truths in the mythical and symbolic structures in the Bible to explain the Powers Above, the Powers Below or After Life, The Beginning, and the End. This cultural "envelope" of Semitic origin replaces the pre-christian Hellenic/Roman, Celtic, and Teutonic mythological universe. In other words, literature is an organic growth within the cultural experience circumscribed by the "cultural envelope" and becomes meaningful within the value system sustained by such a mythological universe, which in faith is true, and embodied in sacred myths and symbols, or mysteries. But to people outside that "culture envelope" they are basically archetypal myths and symbols having names in a language. cf. Anatomy of Criticism (1957), pp. 34-35; The Great Code: The Bible and Literature (1982), xi. The mythological universe sustains the 'cultural genetic code,' for primordial creation and aesthetic re-creation based on the experience and imagery of procreation Creation and Recreation (1980), pp. 4. Echoing Taittiriya Upanishads, Frye maintains that the language in its mythic and symbolic sense provides a 'double vision' of the physical and the transcendental and the mystery behind the knowledge (of approximations to truth or mythic and symbolic structure) is not darkness but greater knowledge in shadow or silence. The basis of faith in a religion is not an historical fact or logical proposition, but the 'fact of faith', the imaginative grasping of Truth through myth and symbol, or 'imaginative literalism' caused by the 'double vision' in the language The Double Vision (1991), p. 17.

[5]Some examples of such experimentation under Workshops of International Comparative Literature Congress carried out at SUNY New Paltz include integration of non-Western texts in the traditional Western curriculum, and developing an appropri-

ate critical focus from a World Literature point of view: (1) Epic Genre in World Literature, (2) Principles of Literary Criticism; Aesthetics of literature without letters (oral literature), (3) Myth, Symbol and Fable in Literature. (4) Mystical and Metaphysical Poetry, and (5) Literature of Life after Life.

[6]Plato, Republic, Book 7, the myth of the cave is used to explain existential illusion or the doctrine of maya.

Global Issues, An Interdisciplinary Core Course

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In the late 1980's the Moravian College faculty adopted what became known as "the green pages," a list of principles -- printed on green paper and part of a longer report -- around which a new Core Curriculum could be built. The principles were that a new curriculum i) be more uniform, ii) be more interdisciplinary iii) be broader in scope (more Western culture, more global awareness, more science, more communication), iv) encourage students to take advantage of campus cultural programs, and v) be more gender-balanced. Our resulting Core Curriculum, taken by 25% of our students, comprises seven courses:

1st semester
- °Macrocosm/Microcosm I (studies a number of exemplar periods and documents in Western history)
- °Communications

2nd semester
- °Macrocosm/Microcosm II[1]
- °Quantitative Problem Solving[2] (mathematical and other strategies for solving prob lems)

3rd semester
- °Revolutions in Science (a laboratory course on the history of science)

4th semester
- °Global Issues

5th semester
- °Capstone Seminar[3] (currently considers the character of American life)

Six of the courses are team taught; Communications sections have a common syllabus. Students are also required to take two terms of a foreign language and eight half-term physical education courses. For two summers before we began to teach the Core, the faculty who were involved in the Core participated in two intensive seminars based on "great books" and "great ideas." The first summer's seminar was funded by the Dana Foundation and Moravian College; the second was funded by NEH.

The above description is much neater than what actually happened, of course. The process of deciding on principles and courses, of finding faculty, and of inventing syllabi demanded a great deal of energy and negotiation. The faculty who teach in the Core are self-selected; general education at Moravian College, including both the new Core and the old cafeteria-style Guidelines, will be reviewed in 1995.

The authors of this article -- a theologian, an historian, and a sociologist -- volunteered to teach the sophomore-level Global Issues course. As we discussed what we wanted students to learn, our list seemed quite long. Many on the larger faculty encouraged us to be sure that students "get used to reading a newspaper" and "know where China is." We agreed, but we had a larger agenda which included a broader definition of geography, political and economic issues, and questions on population

and ecology. After long discussions and two semesters of being taught, the course described below represents what we feel to be a "good" course, one that we can defend and one in which students grow. While we are still tinkering, the course is now organized into four units: worldview, geography, and world affairs; global hunger; other global issues; and visions for the future.

* * *

Course Contents:

Worldview, geography, and world affairs: The theme that unites this course and links it with the other Core courses is "worldview." It takes several classes for students to understand what a worldview is and that they have one. We read a portion of Gary Althen's American Ways, a book written for international students about who Americans are, and then students are asked to write a one-page essay which links the American worldview to the larger Western worldview which they studied in their first-year courses, Macrocosm/Microcosm. We refer to the Western worldview as "modernism" and examine Western ways of looking at nature, time and space, the individual and society, and the globe in general.

The class then considers four topics -- geography, worldview, history, and current issues -- in seven large geographic regions: Western Europe, United States, Latin America, Sub-Saharan Africa, Western Pacific Basin, Arab Southwest Asia and North Africa, and Central and Eastern Europe.[4] Three weeks of lectures and discussions provide the opportunity to consider major questions of how the world came to be the way it is.

The major sub-theme in this portion of the course is 500 years of intensifying interaction between the Western modernist worldview and other worldviews. Our examples include, but are not limited to, the dependency debate in Latin America, the Europhile-Slavophile question in Russia, the form of modernization in Japan, nationalism and pan-nationalism in Africa and the Arab Middle East, and the EU in Western Europe. We want our students to begin to see others' points of view, develop a sense of global complexity, acquire a framework for interpreting global events, and attempt reflexivity about their own worldview. In this last matter, we want them to consider what is useful in modernism (e.g., scientific method, participation, markets, respect for individuals), what is inevitable (e.g., globalism), and what is exploitative and destructive (e.g., dualistic thinking, view of nature as machine, excessive individualism, fascination with power, materialism, colonialism and neocolonialism, scientism).

While we are considering these topics, we ask students to learn 250 place names of selected countries, capitals, physical features, US states and cities. Students purchase the inexpensive Goode's World Atlas for this and other class work. It is still disappointing when we give the map portion of the first exam that some students can't find Washington D.C., but most get 15 or more of the 20 selected items correct. We chip in to give a National Geographic world map to those who get perfect papers (three out of about 60 students each time we have taught the course) in an appropriate ceremony near the end of the course. The other students genuinely admire their colleagues' achievement.

Since one of our goals is to enable students to make some sense of international affairs, it is important that they read a quality newspaper. We have selected The Chris-

tian Science Monitor because of the quality of its writing and analysis and its global perspective, and because its small size and color make it manageable for those unaccustomed to serious newspaper reading. The papers are delivered in bulk five days a week (subject to varying postal schedules) to the college bookstore, where students pick up their copies. We require them to read at least the first four pages, focussing on non-U.S. topics. In discussion section quizzes and on examinations we ask students to report on events of the current week. Questions are relatively straightforward and allow students some selection of the article they discuss. At the end of the semester the lowest grade is dropped for those who complete all the quizzes.

In lectures and discussions we make a point to refer to recent Monitor stories. We often ask students to find news examples of concepts we are introducing in class. By the end of the semester most students can take an international news story and analyze it in the context of our overall discussions. We hope a number of our students will either continue the habit of reading a quality newspaper or at least resume it in later life.

Global Hunger: In the sixth week of the course we ask students to consider the question of global hunger. We chose hunger because its salience and emotion engages students from even the most parochial backgrounds. Our intent is to model for our students how they might take a particular global problem and analyze it in some depth. In doing this, we are careful to apply concepts learned in the first unit, present new information and concepts, and demonstrate the interdisciplinary nature of both global problems and their solutions. Meanwhile, each student has begun to undertake research on a separate global problem. (See our description below.)

Lecture topics and readings for these four weeks cover the many problems of global food production and distribution, and compare recent dietary trends among North Americans with food patterns in a non-industrialized society (in this case, Zaire). Our text for the unit is Frances Moore Lappé and Joseph Collins' World Hunger. Twelve Myths, plus shorter pieces about topics such as the Green Revolution, protein complementarity, and the cultural choice of food. A simulation game, "Hungry Decisions," has small groups work through a decision tree of steps in the life of a hypothetical Third-World villager confronted by hunger; the hard choices engage students' affect as well as their intellect. Timely articles and series in The Monitor usually allow us to illustrate the importance of this issue as a real world problem.

Other global issues: In the next three weeks we present or ask faculty colleagues to present topics such as overpopulation and the "demographic transition," the nature of development, the greenhouse effect, biodiversity, pollution, energy policies, globalist theology and spirituality, and the effectiveness of local activism. These topics are handled much more briefly, but as with global hunger we attempt to point out lines of regional interdependence and interdisciplinary complexity. Readings include Lester Brown's World Watch Reader as well as brief articles suggested by our colleagues. (Most of these latter selections are incorporated in our Global Issues Reader.) In discussion sections we help students with the readings and work to tie the lectures to our course themes.

It is in this connection that the students contribute most significantly to intensify-

ing their own understanding and to helping broaden their classmates' perspectives in a formal way, for it is in this section of the course that their semester-long research projects culminate. Throughout the semester, each student works on a specific research topic in one of nine areas of global concern: development; education and information; energy; health; pollution; population; urbanization; war and peace; and world order. Students are assigned to one of nine equal-sized topic groups, with their preferences accommodated as much as possible. Each faculty member supervises three of these groups, groups which also comprise his/her discussion section for the semester.

The sequence of assignments which comprises these projects is distributed over the term as (1) an annotated bibliography of at least 20 substantial sources; (2) the outline of a projected summary of student's findings and conclusions; (3) a 3 to 5 page briefing paper of those results, and (4) a brief formal oral report by each student to his/her own discussion section.

Many students enter the course only marginally prepared to undertake this kind of research, so we are careful to provide as much "hands-on" assistance as possible. This begins early in the term, after students have chosen their topic areas, with a series of research seminars conducted by three of the College's Reference and Public Service Librarians. Each of these librarians has taken time to become familiar with (and assist in the process of augmenting the library's resources in) three of the nine research topic areas, and they, thus, conduct bibliographical instruction sessions with the three small groups of students working in the topic areas in which they have specialized. These sessions are also attended by the faculty member who will be working throughout the term with the students in each of the topic area groups, and the faculty continue to encourage students to avail themselves of additional assistance from the librarians throughout the research process; the operant advice is, "Befriend your librarian." As a practical matter each student's project components are graded by the instructor overseeing the topic groups of which he/she is a part.

One member of the team (Smolansky) has also written an appendix to our text entitled "Some Tips on Writing an Annotated Bibliography." This offers concrete advice on how to find research resources using our library and how to write useful annotations on the sources located.

Though the specific foci and theses of individual students' presentations are quite diverse (they have ranged from such issues as the analysis of the costs and benefits of North Slope Alaskan oil exploration to a comparison of the League of Nations and the United Nations as models for establishing world order), the instructors attempt to help students see the common threads and concerns that are an implicit part of each of these topic areas. For example, students are encouraged to ask and answer such questions as: what is the nature of the problem (explicit and implicit)?; what are the causes of the problem?; are there any viable solutions to the problem?; and what are the consequences and/or impediments to implementing or not implementing such solutions? Within each subgroup and often across subgroups there tend to be common thematic answers to these questions. And, while various subgroups of students examine different specific issues, each is exposed to a similar analytical framework that we hope will serve them well as they enter adult life and confront these kinds of problems as citizens of the globe.

Visions for the future: In the final four classes we ask students to consider what might be appropriate worldviews for the 21st century. As a class we "brainstorm" about beliefs we might need to hold if humanity is to survive and flourish. Then we help students organize their thoughts by discussing the take-home question for the essay portion of the final. The question asks students to describe what they think will be appropriate 21st century beliefs in six areas: individualism and community, government, cultural diversity, space and time, nature, and sacred or 'unseen' powers.

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The Pedagogy of Team Teaching: Practices and Principles:

One of the most time-consuming aspects of team teaching is the necessity for careful planning and coordination. We invested months of weekly meetings to determine the division of labor for organizing classroom lectures and activities and to agree upon and organize the research projects described above. We also had to devise ways of dealing efficiently and equitably with all the myriad details generated in a course offered to more than 60 students, meeting twice a week in plenary sessions and once a week in smaller sections, and requiring large quantities of written work.

Our division of labor, while perhaps not necessary to the success of the course, has served us well. Each of us has assumed primary responsibility for one of the first three major units of the course, and we work collectively on the concluding unit. We do, however, have a commitment, one which we regard as essential, to attending all of the classes and to interjecting questions and amplifying comments into each other's presentations. This requires a high degree of mutual respect and trust among the participating faculty members, an ethos that can only be fostered if the members of the teaching team have worked together collegially to prepare the course. It does not require that they be of one mind about controversial issues, but rather that they have a clear, shared vision of what they are trying to help their students accomplish. Thus, we quite consciously model for our students the processes of collaborative learning as well as teaching.

We share the grading of papers in as equitable a fashion as possible, both from the perspective of fairness to each other and to our students. One set of assignments is six "response papers" (typically running no more than two pages each) on a variety of topics. Some of these papers are analytical or synthesizing efforts, such as relating a convocation speaker's comments to major concepts in the course, or assessing the modernism-dependency debate on Latin America. Others are more practical, applied papers, such as constructing an outline of a specific reading assignment. (The latter type of assignment has the dual benefit of giving students practice in the exercise of useful skills and of forcing them to consider carefully material on which they will be tested.) The evaluation of these response papers is done by rotating the grading among the three instructors throughout the term, so that any given set of papers is graded by only one instructor. This system lessens the logistical burden on each team member and, even more importantly, assures that each student receives equal treatment in the grading process.

Indeed, we use the same system for the grading of examinations; that is, they are deliberately formatted so that they are always presented in three parts (on separate

pages), so that we simply separate the parts and each of us grades one of the three. One team member then reintegrates the separate parts, averages the grades, and performs some statistical analysis on the patterns of performance before the tests are returned to the students. The other two instructors alternately share the oversight of test construction and duplication, but all three decide together the actual content of examination questions.

Each instructor evaluates assignments completed specifically for his or her small group sessions that comprise the third meeting of each week. These assignments include the research project and the brief quizzes on The Monitor. (These quizzes are constructed to make them simple to grade in consistent fashion by multiple graders.) The chore of constructing and duplicating such quizzes, as well as structuring an agenda for these section meetings, is rotated among the team members. The premise is that, although such sessions are necessary because students are likely to be more willing to discuss complex issues in smaller group settings, the specific tasks that we undertake and the subjects that we discuss should be as closely comparable across sections as we can make them.

The reason that this system works so well is that we respect each other's strengths and understand each other's varying interests. Thus, there is no nitpicking about whose turn it is to do this or that, but rather a spirit of commitment to sharing fairly the work of the course.

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Conclusion

A course such as this is definitely more work than one of our regular courses, for both faculty and students. We have found, however, that the extra work provides us more satisfaction in terms of collegiality and teaching standards. As faculty, for example, team teaching means that we can participate in real intellectual discussions which hone our ideas and we can model for our students meaningful examination of ideas. We can also share responsibility for our teaching failures and collaborate in figuring out ways to improve. And perhaps most useful for ourselves and for our college, by watching each other teach we have learned new teaching methods that we can adopt in our non-Core courses. Everyone who has taught a Core course has revised his/her other courses as a result.

One of the most important benefits of the Core experience is our clear sense that our students are growing. By the time we begin Global Issues the students have had four common Core courses (next time we teach it will be five) in which they have developed knowledge, skills, and relationships that we can assume and build on. We don't have to start at the beginning with every topic, and we don't have to build a class rapport in order to have meaningful discussions. In fact, one of the best experiences we have is watching the students care for each other in their self-organized study groups and in class discussions. And since the Core students often choose their friends within the Core we hear regularly of dorm discussions that focus on topics we have worked on in class rather than on the more usual pop music, TV, sports, and mating.

As for the Global Issues course itself, an informal poll of former students indicates that they carry with them much of what we intended. One student remarked that "We are in a bubble and the course helped us to be aware of the world and to be open and

accepting of other cultures." Another said "It challenged me to look beyond the superficial, beyond the media glossed explanations, and beyond the jargon of the politicians." Another remembered the map quiz and said "It was a humiliating experience because I didn't know as much as I thought. I not only learned about place names and locations but also about the importance of relationships between places." A favorite comment for us was that of one good student who said "After being in this course I can kick a-- in my other courses," referring to the level of work and to the skills he had learned.

We are now in the process of revising Global Issues to take account of both our recent teaching experience and a change in our teaching team. We have quickly learned that the "old" course described above is very much particular to our points of view and personalities. A new colleague -- an economist rather than a sociologist -- means significant changes will have to be made. While this fresh breeze will benefit our students, it will also mean new hours of preparation in order to understand exactly how the new team differs or agrees on global issues. Several years ago when we began to shape the Core, one of our justifications for our effort was that teachers cannot expect students to integrate knowledge or understand how various disciplines relate to each other if faculty themselves do not integrate, understand, and model. Difficult as this work might be, the effort still seems to be at the heart of what we are trying to accomplish.

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NOTES

1. Dana Dunn, "Perspectives on Human Agression: Writing to Einstein and Freud on 'Why War?' in Teaching of Psychology, 19 pp 112-114. Dana Dunn, "Integrating Psychology into the Interdisciplinary Core Curriculum," forthcoming in Teaching Psychology.

2. John Dilendik, Bettie Smolansky, and Kat Somers, "Core: An Interdisciplinary Course in Quantitative Problem Solving," forthcoming in PRIMUS (Problems, Resources, and Issues in Mathematics Undergraduate Studies)

3. Dana Dunn, Steve Gordy, and Bob Mayer, "Exploring American Character," forthcoming in Moravian College Magazine.

4. Using a monograph drafted by Curt Keim, and incorporated as part of the anthology we have produced for the course. This monograph, A Regional Approach to Global Issues, was written with the help of a small grant from the Pennsylvania Council on International Education. We also acknowledge our debt to Dr. Pierrce Lewis of The Pennsylvania State University.